Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
High-Cost Universal Service Support	WC Docket No. 05-337
Federal-State Joint Board on Universal Service	CC Docket No. 96-45
Lifeline and Link Up	WC Docket No. 03-109
Universal Service Contribution Methodology	WC Docket No. 06-122
Numbering Resource Optimization	CC Docket No. 99-200
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996	CC Docket No. 96-98
Developing a Unified Intercarrier Compensation Regime	CC Docket No. 01-92
Intercarrier Compensation for ISP-Bound Traffic	WC Docket No. 99-68
IP-Enabled Services	WC Docket No. 04-36

Declaration of

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submitted on behalf of

Broadview Networks
Cavalier Communications
Nuvox Inc.
Pac-West Telecomm, Inc.
tw telecom inc.
XO Communications

November 26, 2008

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EXECUTIVE SUMMARY

In its landmark *Local Competition First Report and Order*, the Commission established a cost standard – TELRIC – for the pricing of unbundled network elements, interconnection, and the transport and termination of calls originated on another carrier's network. That standard – which has survived intensive scrutiny going all the way to the US Supreme Court – lies at the core of the rules adopted by the Commission to implement the local competition provisions of the *Telecommunications Act of 1996*. Now, the FCC has sought comment on a draft order that would eliminate TELRIC – but only for the particular services where the large Bell operating companies (BOCs) often purchase more than they sell.

Under the forward-looking economic cost standard that would continue to apply to unbundled network elements and interconnection services, prices include a reasonable allocation of forward-looking joint and common costs. In selecting a single, consistent methodology for UNEs, interconnection, and transport and termination, the Commission sought to make carriers indifferent as to the form in which they bought and sold services from each other. The novel approach being advocated in the proposed order disrupts that carefully crafted framework. Breaking from the TELRIC standard, the proposed order seeks to set prices for the transport and termination of calls based upon what amounts to a type of short-run incremental cost, without allocating to these services any of the joint and common costs that arise in the long-term from the ongoing construction, expansion, and operation of the ILECs' networks.

The proposed order, which suggests that its novel approach is consistent with accepted economic theory, incorrectly interprets the economic literature upon which the proposed order relies and, more importantly, mischaracterizes the new approach as actually accounting for the "long run" costs that are central to the TELRIC methodology. Contrary to the proposed order's characterization of the "Faulhaber approach" as specifying a price set at "incremental cost," all that Prof. Faulhaber was doing in the paper upon which the proposed order relies was to define the range of "subsidy-free prices;" nothing in his paper purports to specify where, within that range, the appropriate or efficient price should be. It is thus noteworthy that in establishing its TELRIC rules such that the price set for any particular element would be based upon "the sum of a reasonable allocation of forward-looking common costs and the total element long-run incremental cost of an element" and would not exceed this "stand alone cost," the Commission was expressly addressing – and resolving – that specific question.

The proposed order displays a highly simplistic view of the cost structure of today's telecommunications networks when it treats the costs of high-capacity facilities as "fixed." Moreover, the decision to (arbitrarily) ignore long run joint and common costs by declaring one service "incremental" to all others does not make those costs go away, and there is no rational

basis for selecting the favored "incremental" service that will obtain what amounts to a free ride with respect to its use of joint and common resources.

As with the proposed exclusion of joint and common costs, there are also serious problems with the notion of excluding all overhead allocations. Overhead costs are not "fixed" in the long run; in telecommunications as in many other industries, these costs vary both linearly and roughly proportionately with the overall scale of the business (i.e., with the volume of its output). Because call transport and termination is every bit as much a contributor to the overall volume of activity that occurs on a carrier's network as, for example, its provision of unbundled loops, there is no justification for selectively ignoring or treating as "fixed" the additional overhead costs engendered by this one particular service.

Finally, the novel approach set forth in the proposed order discriminates against and imposes an undue burden upon smaller carriers whose cost structure differs from that of the large BOCs. Whether or not a large multiproduct BOC could feasibly ignore the joint and common costs of its network with respect to the pricing of one particular service, a similar approach would be absolutely untenable for smaller, more specialized CLECs. Individual CLECs frequently are not multiproduct firms whose facilities are shared across a broad range of products and services. Put differently, CLECs are not merely miniature versions of the BOCs. Yet the proposed order implicitly presupposes a comparable cost structure as between the large BOCs and their much smaller competitors, and on that basis would restrict CLECs to collecting rates based upon the ILECs' costs. Ironically, while the discriminatory treatment of large ILECs vs. CLECs that would arise under the "incremental cost" approach being proposed would likely increase the need for CLECs to seek asymmetric treatment, under the proposed order the Commission would "now require symmetric rates and conclude that the exception that permitted asymmetric rates under certain circumstances is no longer warranted." This makes no economic sense and is contrary to the pro-competitive policies embodied in the *Telecommunications Act of 1996* and the *Local Competition First Report and Order*.

Simply stated, the proposed approach to setting intercarrier compensation rates is arbitrary, discriminatory, will result in noncompensatory prices, is biased in favor of the large RBOCs at the expense of CLECs, and at a minimum is certainly not sufficiently developed for adoption in the type of abbreviated time frame being allowed here. The Commission should not adopt the proposed order.

DECLARATION OF LEE L. SELWYN

Introduction

1. My name is Lee L. Selwyn; I am president of Economics and Technology, Inc. ("ETI"), based in Boston, ETI is a research and consulting firm specializing in telecommunications economics, regulation and public policy. I have submitted testimony before the Commission on numerous occasions dating back to the late 1960s, and have appeared before the Commission at several *en banc* hearings. My Statement of Qualifications is annexed hereto as Attachment 1 and is made a part hereof.

2. I have been asked by Broadview Networks, Cavalier Communications, Nuvox Inc., Pac-West Telecomm, Inc., tw telecom inc. and XO Communications to review the Chairman's proposed order at Appendices A and C to the *Order on Remand and Report and Order and Further Notice of Proposed Rulemaking* ("FNPRM") in the above-referenced proceeding, to address the economic and policy implications arising from the proposed adoption of a "stand alone" additional or incremental cost methodology to the pricing of intercarrier transport and termination charges, and to assess the extent to which the Chairman's proposal will result in a comprehensive, cost-based and nondiscriminatory approach to intercarrier compensation.

The proposed "stand alone" costing methodology is a radical departure from the existing TELRIC standard, and will be incapable of producing compensatory rate levels.

3. Central to the Chairman's proposed order's plan for implementation of a unified intercarrier compensation rate is the replacement of the costing methodology adopted by the Commission in the 1996 *Local Competition Order*[1] known as Total Element Long Run Incremental Cost ("TELRIC") with an "incremental" or "stand alone cost" approach. However, the Chairman's proposed order does not propose that the use of TELRIC be abandoned for pricing of Unbundled Network Elements ("UNEs"). The new "incremental" or "stand alone cost" methodology is only being advanced as a basis for setting unified intercarrier compensation rates that would replace the existing patchwork of state and interstate switched access charges, reciprocal compensation payments for the exchange of local traffic, and the service-specific arrangements and rules that are applied for ISP-bound traffic and wireless.

4. As a general matter, TELRIC studies have been developed, mainly in state PUC Sec. 252(c) arbitration and other ratesetting dockets based upon the ILEC's costs. Those studies have been used as a basis for setting rates that the ILEC charges other carriers for services provided by the ILEC – typically UNEs and interconnection arrangements. The proposed "incremental" or "stand alone cost" approach is unique in that it would rely upon ILEC – and mainly BOC – costs as a basis for setting, among other things, prices that CLECs could charge for call termination services they provide to those same BOCs. Whereas BOCs confronted several

1. *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 and Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, *First Report and Order*, 11 FCC Rcd 15499 (1996) (*Local Competition First Report and Order*).

financial and business incentives to bloat their TELRIC studies in an effort to justify the highest possible UNE rates that their competitors would be forced to pay – even going so far as to challenge TELRIC-based UNE rates as being insufficient to recover their "actual" costs[2] – the BOCs' incentives with respect to reciprocal compensation rates are precisely the opposite since, in this one instance, the BOCs have occasion to be paying out the rate in question and thus seek to achieve the *lowest* possible rate level. This incentive has been intensified by the fact that, overall, the largest ILECs – AT&T, Verizon and Qwest – transfer more traffic to CLECs for termination than occurs in the opposite direction. This persistent traffic imbalance would suggest that, under any unified intercarrier compensation arrangement, these BOCs would be paying more to CLECs to terminate calls originated by their customers than CLECs would pay them to terminate calls sent by CLEC customers.[3] By excluding several important cost sources from the proposed "incremental" or "stand alone cost" calculus, the approach recommended in the Chairman's proposed order would produce an outcome that supports the BOCs' goal in a

2. *Verizon v. FCC*, 535 US 467, 508-509, 511 (2002). Even after the Supreme Court had fully upheld the FCC's TELRIC rules, the RBOCs continued to raise issues of "actual cost" recovery in their challenges to state TELRIC proceedings. S*ee, e.g.,* Affidavit of Debra J. Aron (filed May 27, 2003) on behalf of Illinois Bell, *Voices for Choices, v. Illinois Bell*, No. 03-C3290 (ND Ill. ED), at 10 ("The UNE prices previously determined by the ICC [Illinois Commerce Commission] and currently in effect for SBC Illinois ... have been far below SBC Illinois' actual costs of providing those UNEs.")

3. Unified intercarrier charges would, of course, also apply for other types of traffic, including long distance and wireless. However, as a result of the vertical integration of the AT&T and Verizon ILEC, IXC, broadband and CMRS operations, these "intercarrier" payments devolve into either intracompany paper transfers or approximately balanced intercarrier payments flowing between AT&T and Verizon. With respect to such payments and paper transfers, the magnitude of the unified intercarrier compensation rate will have little direct impact upon the intra-company and AT&T⟷Verizon payment flows. Moreover, to the extent that the RBOCs' ILEC affiliates are enabled to offset some or even all of the reductions in switched access revenues through increases in their Subscriber Line Charges (SLCs) and other end-user payments, they would be largely made whole irrespective of the unified intercarrier rate level that is ultimately established. CLECs, on the other hand, will not have a similar "make whole" opportunity except in the unusual instance where their individual product/customer mix happens to roughly parallel that of the RBOCs, albeit at a smaller overall scale.

way that is neither reasonable nor consistent with the pro-competition goals of the *Telecommunications Act of 1996* ("*1996 Act*").

5. The analysis that the Commission had used to develop its TELRIC rules was carefully crafted to avoid burdening or advantaging the sale (or purchase) of any particular network element or functionality relative to any other element or functionality, with respect to shared and common costs. Giving balanced consideration to the concerns of both incumbents and new entrants, the Commission prescribed that the prices of all unbundled network elements and interconnection arrangements, *including* the transport and termination of calls originated on another carrier's network, were to include a "reasonable allocation" of joint and common costs. At that time, the Commission fully considered and rejected various alternative costing approaches, among them that of setting prices based upon incremental costs alone. Notably, it was the RBOCs that had most strenuously objected to a pricing mandate based exclusively upon incremental costs, arguing that it would prevent them from recovering the "total costs of the network."[4]

6. Para. 245 of the Appendix A (para. 240 of the Appendix C) proposed order notes that:

> In the *Local Competition First Report and Order*, the Commission, in adopting its TELRIC methodology, explained that "[t]his 'long run' approach ensures that rates recover not only the operating costs that vary in the short run, but also the fixed investment costs that, while not variable in the short term, are necessary inputs directly attributable to providing the element." We reaffirm here the Commission's decision in

4. *Local Competition First Report and Order,* at para. 638.

> the *Local Competition First Report and Order* that long-run incremental cost rather than short-run incremental cost is the appropriate cost concept.

In that same paragraph, the proposed order also observes that

> ... setting prices on the basis of short-run incremental cost may mean that a carrier would not recover its average total cost of investment over the life of the asset.

These earlier determinations, adopted in 1996, are fundamentally correct.

7. The Commission had also recognized that certain so-called "fixed investment costs" are "fixed" only in the short run.[5] Over time, "fixed" plant needs to be expanded as demand for service increases, and must also be replaced as previously-deployed plant wears out or becomes technologically obsolete. If the prices that are prescribed by the FCC are not sufficient to permit recovery of these "fixed investment costs," such investment will not take place, either for expansion or replacement.

While described as being based upon "long run" costs, the proposed "stand alone cost" approach to determining the "additional costs" applicable to call termination in reality is based upon short-run costs and, as such, will result in rate levels that will unduly benefit BOCs while failing to adequately compensate CLECs for the costs they incur in terminating traffic handed off to them by other carriers.

8. Although the Chairman's proposed order seeks to characterize its proposed "additional cost" or "Faulhaber" approach as producing "long run" costs, in reality it is far closer to a short-

5. *Id*., para. 692.

run incremental cost paradigm because, at bottom, most costs would be treated as fixed and, as such, are excluded entirely from the "incremental cost" calculation. Moreover, the proposed "Faulhaber approach" excludes all so-called "joint costs" – costs that are incurred to support two or more separate products or services. Instead, the proposed approach to calculating "incremental costs" ascribes to the product or service being examined only those cost elements that are product-specific and that would not be incurred at all if that product were not offered, treating all cost elements that support two or more products as "joint costs" or "common costs," and on that basis excluding these from the "additional costs" of the product in question. The Chairman's proposed order's "long run" characterization notwithstanding, the effect here is to treat all non-product-specific costs as fixed in the long run. Put differently, despite the FCC's earlier recognition that "the fixed investment costs that, while not variable in the short term, are necessary inputs directly attributable to providing the element,"[6] the proposed "additional cost" approach operates to exclude those fixed investment costs altogether.

9. In any event, the approach being advanced in the Chairman's proposed order represents a radical departure from the one used in the *Local Competition First Report and Order*. There the Commission adopted (and memorialized in its Rules) a definition of "stand-alone costs" as "the total forward-looking costs, including corporate costs, that would be incurred to produce a given element if that element were provided by an efficient firm that produced nothing but the given

6. *Id.*

element."[7] By requiring that the price set for any particular element based upon "the sum of a reasonable allocation of forward-looking common costs and the total element long-run incremental cost of an element" not exceed this "stand alone cost," the Commission sought to ensure that a reasonable and not disproportionate share of common costs could be allocated to that element.[8] The Chairman's new theory is based upon a radically different approach to the "stand alone costs." Rather than considering what it would cost to provide a particular service on a stand-alone basis, the new approach associates "stand alone costs" of the network with the totality of services other than the (arbitrarily selected) "incremental" service and assumes that the "incremental" service is entitled to what amounts to a free ride with respect to any common costs.[9] Significantly, in a 2002 Note by Prof. Faulhaber "prepared at the request of Sprint to clarify some questions concerning the application of my earlier work on cross-subsidy to address questions that have arisen in regulatory proceedings," he offers the following explanation:

> In brief, if the revenues of a regulated enterprise just cover total economic costs, then all prices are subsidy-free if the revenues of each service and each group of services is at least as great as the incremental cost of that service or group of services; equivalently, prices are also subsidy-free if the revenues of each service and each group of services is no greater than the stand-alone cost of that service or group of services.[10]

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7. *Id.*, Appendix B, Final Rules, Rule 51.505(a)(2)(A), codified at 47 C.F.R. 51.505(a)(2)(A).

8. *See*, *Id.*, para. 698

9. FNPRM, App. A, para. 248; App. C, para. 243.

10. Faulhaber, Gerald R., "Cross-subsidy Analysis with More than Two Services," Wharton School, University of Pennsylvania, August 11, 2002, available at: http://assets.wharton.upenn.edu/~faulhabe/cross%20subsidy%20analysis.pdf (visited 11/24/08).

In other words, the "incremental cost" represents a price floor, whereas the "stand alone cost" represents a price ceiling. Contrary to the characterization of the "Faulhaber approach" in the Chairman's proposed order, all that Faulhaber is doing is to offer a range of "subsidy-free prices;" nothing in his paper purports to specify where, within that range, the appropriate or efficient price should be. It is thus noteworthy that in establishing its TELRIC rules such that the price set for any particular element would be based upon "the sum of a reasonable allocation of forward-looking common costs and the total element long-run incremental cost of an element" and would not exceed this "stand alone cost," the Commission was addressing – and resolving – that specific question.

10. "Short run" and "long run" are, of course, relative concepts and cover a broad spectrum of time frames. The Chairman's proposed order seems to view "short run" in terms of a time frame so truncated that it virtually eliminates the possibility of any cost variability. The Commission provides the following description and example to illustrate why its considers incremental cost to be appropriate:

> In order to set prices so as to maximize economic efficiency at any particular point in time, it is clear that short-run incremental cost is the appropriate concept. For example, if an airline carrier has empty seats for a particular scheduled flight, then it would make sense to sell capacity for those seats at any price that would recover the small additional costs of fuel and amenities for an additional passenger. Pricing based on short-run incremental cost, however, necessarily implies that prices can be adjusted freely and perhaps continuously during the day.[11]

11. FNPRM, App. A, para. 244; App. C, para. 239.

In practice, however, it isn't anywhere near that simple. If the flight were a one-time event and not a routine element of the air carrier's ongoing business, the strategy suggested by the Chairman's proposed order could well be the one that maximizes economic efficiency. However, the use of discount fares as a means for maximizing total revenue has, for several decades now, been a central element of the airlines' business model, to the point where the overwhelming majority of all airline tickets are sold at some discount relative to the full economy ("Y") fare. The proposed order's suggestion ignores the inevitable cross-elasticity between the demand for a seat moments before take-off and the ongoing demand for reserved seats on the plane. If the "regular" ticket price is, say, $500 but the price set on the basis of short run costs moments before take-off were, for example, $5, some customers who might otherwise have been willing to pay the $500 for a reserved seat will nonetheless attempt to "game" the system by taking their chances on scoring one of those $5 tickets (covering only the incremental cost of fuel plus a bag of peanuts), the airline would lose the revenue that would have come from some number of those $500 tickets. Thus, by offering tickets priced at "short-run marginal cost" (as the Chairman's proposed order seems to understand the term), the airline would perhaps sell more seats overall, but end up with *less revenue* than if it let the plane take off with some empty seats.[12] Instead, airlines have developed highly sophisticated pricing models that consider, among other things, demand for specific flights on specific dates, own and cross price elasticities

12. Retail chains and department stores have discovered that consumers have come to expect large markdowns and sales immediately before Christmas to the point where purchases were being deferred in anticipation of such price reductions. As a result, retailers have found it necessary to offer pre-Christmas sale prices successively earlier each year. Indeed, this year, perhaps in part due to the overall economic slowdown, pre-Christmas sales seem to have start even before Thanksgiving. *The New York Times*, November 18, 2008.

of identifiable market segments, and specific devices ("restrictions") that enable different prices to be offered to each market segment for what is, superficially at least, the identical service.

11. Indeed, while the Chairman's proposed order cites Alfred E. Kahn's *The Economics of Regulation* for the proposition that "In order to set prices so as to maximize economic efficiency at any particular point in time, it is clear that short-run incremental cost is the appropriate concept," Kahn's notion of "short run cost" is far more robust than the overly simplistic view expressed in the proposed order. According to Kahn, "... price must include all of the costs that production of an additional unit imposes, regardless of when those costs are actually realized."[13] Kahn explains that "[i]f, for example, taking on additional business ... will cause capital equipment to wear out faster and therefore need to be replaced sooner than otherwise – then the principle of causal responsibility would clearly require that these longer-run marginal costs be reflected in price."[14] Thus, while the one-time sale of an otherwise empty airplane seat moments before the flight leaves the gate may not "cause capital equipment to wear out faster and therefore need to be replaced sooner than otherwise," the practice of offering discount airline fares as a central component of the airlines' business model clearly affects both short- and long-run demand, and both short- and long-run incremental cost. Similarly, the ongoing and permanent offering of a service, such as terminating calls handed off by another telecom carrier is not a one-time, isolated event, and will similarly affect short- and long-run demand and thus

13. Kahn, Alfred E., *The Economics of Regulation: Principles and Institutions, Vol. 1* (New York: John Wiley & Sons, Inc., 1970), at 71.

14. *Id.*

impact short- and long-run incremental cost. The Chairman's proposed order's suggestion that such capital investment costs are "fixed" is simply wrong.

12. At Appendix A para. 272, the draft finds that "the least cost, most efficient technology for transport is fiber optic cable" and on that basis (at para. 274) holds that "because carriers tend to deploy significant excess capacity when deploying fiber, the incremental cost of adding traffic is likely to approach, or equal, zero." Here the draft is confusing "fixed costs" with the economic concepts of "breakage" or of "lumpiness" in supply or demand. Indeed, nowhere in the Chairman's proposed order is there any recognition or, for that matter, even mention of these concepts – a key omission that may well account for the Chairman's proposed order's apparent misunderstanding of "short run" vs. "long run" costs.

13. Plant and equipment must typically be purchased in incremental capacities that involve multiple units of demand. For example, although passengers purchase airline tickets one seat at a time, aircraft come in a limited number of discrete sizes in terms of the number of seats on the plane. Demand for telecommunications services may be expressed in terms of minutes of use or voice-grade-equivalent ("VGE") channel capacities, but switch and fiber optic cable capacities are offered in terms of thousands of busy hour minutes of use or tens of thousands – even millions – of VGEs. If there is an airplane with 80 seats sold out of 100 seats capacity about to leave the gate, one might well conclude that the short-run cost of each one of those 20 empty seats is, in essence, the cost of a bag of peanuts and a small amount of additional fuel. But if all 100 seats are occupied, the short-run cost of one additional seat is the cost of rolling out another

airplane, staffing it with pilots, flight engineers, and flight attendants, topping off its fuel tank, and paying the required airport take-off and landing fees. Viewed on a case-by-case basis, it is simple to suggest that when the plane is full, the airline should simply turn away any additional passengers that might show up. But that might not be the optimal solution for the airline. Rather, it may well be more efficient – and more profitable – to adjust the supply of seats – and to set prices in recognition of the lumpy supply condition – so as to avoid turning away business that might, based upon *long run* costs, be served profitably. If many flights go out with empty seats or if there is excess capacity currently in place in telecom switches and cables, it may well be possible to satisfy a (small) increment of demand at little or no incremental capital investment cost. But as demand continues to grow, flight, switch and cable capacities will reach exhaust, and additional equipment will need to be purchased. These are key elements of long run cost, and yet have been cast aside by the "additional cost" theory being advanced in the Chairman's proposed order.

14. The proposed order also ignores other important effects of breakage or lumpiness when it suggests that "because carriers tend to deploy significant excess capacity when deploying fiber, the incremental cost of adding traffic is likely to approach, or equal, zero." In planning major capital construction projects, carriers consider a variety of factors, including projected growth and economic order quantities. The costs of deploying fiber optic cable involve both the costs of the cable itself as well as the costs of placing or using existing supporting structures, activities that are heavily labor-intensive and that frequently involve obtaining municipal permits and a variety of other administrative requirements. While the cost of the fiber optic cable itself

varies with capacity, the costs associated with its physical placement generally do not. Carriers tend to deploy more capacity than needed to meet *current* demand not because the costs of the additional capacity "is likely to approach, or equal, zero," but because it can be added at lower cost if done at the time of initial deployment than if done later on. In making the decision as to the amount of fiber capacity to deploy, the carrier must still develop detailed, route-specific forecasts of demand growth and accept that risk that, on a route-specific basis, those forecasts might be wrong. If the projected growth in demand fails to materialize, the additional amounts expended on larger capacity fiber cables will have been wasted; if the growth in demand exceeds even the additional capacity that had been placed "in the ground," the costs of adding still more fiber to meet the increased demand could well be quite large.

15. Adding to the complexity of accurately forecasting demand over time is the uncertainty as to the type of demand that will arise. Forecasts of transmission capacity that might have been made in, say, the late 1980s or early 1990s would have focused mainly on voice-grade services without giving any thought to the potential for multi-megabit broadband capacity services being offered at the consumer level. While the capacities of existing fiber optic transmission plant have been expanded through the use of improved electronics and optronics, the demand for bandwidth has also increased, new investments in fiber are being made, and new fiber is continuously being placed both in the interoffice and subscriber plant categories. These investments support a range of applications, and there is simply no reasonable basis upon which any one of them can be singled out – as the proposed order would do – to be treated as having zero impact upon the cost of such plant.

16. Using this purported incremental cost approach (as the basis for the "additional cost" of call termination), the proposed rule goes even further in paring down what can be considered – excluding from the calculation any costs that are not "traffic-sensitive," treating all non-traffic-sensitive costs as fixed in the long run. Under the proposed methodology, "the cost studies must exclude all common costs, including overhead costs. ... all nontraffic-sensitive costs must be excluded from the cost studies."[15] Of course, even the matter of what constitutes a "traffic-sensitive" cost is anything but definitive, as reflected in the Chairman's proposed order's own discussion of the issue:

> We recognize that the incremental cost of terminating traffic may include certain non-traffic-sensitive costs, such as the cost of a trunk port. Consistent with cost-causation principles, however, such non-traffic-sensitive costs may not be recovered through per-minute charges, but must rather be recovered through flat-rated monthly charges associated with interconnection trunks.[16]

In the case of circuit-switched technology (analog and digital electronic switches), line/trunk ports are also traffic-sensitive in that the number of active ports that can exist within a single frame is inversely related to the average volume of traffic to be handled by each port. For non-blocking switches and those with relatively low concentration ratios, frames will typically need to be "de-loaded" – i.e., will not be able to support the full complement of switch ports – when compared with switches with relatively high concentration ratios – i.e., those whose average

15. FNPRM, App. A, para. 273; App. C, para. 268.

16. *Id.*, App. A, para. 271, fn. 717; App. C, para. 266, fn. 708.

traffic load per port is relatively low.[17] While the structure and variability of costs tends to be technology-specific, there are numerous cost dimensions even under the "softswitch" technology that the Chairman's proposed order would require be used as the basis for determining the cost of terminating reciprocal compensation traffic.[18] In fact, IP telephony imposes far greater central processor requirements than circuit-switched telephony because each individual packet must be examined, processed, and forwarded continuously for the duration of a call. Whereas with circuit-switched technology, processor functions are primarily involved in call setup and tear-down and has only a minimal role while the call is in progress, in a softswitch, processor capacity is required throughout the duration of a call. Thus, softswitch technology could well exhibit even greater traffic-sensitivity than legacy circuit switching. And for any technology, there are a number of capacity dimensions besides "traffic-sensitivity" that exhibit variability in the long run. Even when plant is being used to support several or many different products/ services, sizing and expansion/replacement decisions are based upon aggregate demand from all of the jointly supported products. The view adopted by the Chairman's proposed order is thus unreasonably static and unrealistic.

17. Perhaps the most troubling aspect of the Chairman's proposed order's "additional cost" methodology is its total exclusion of all "common" and "joint" costs. According to the Chairman's proposed order:

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17. The complex interactions between demand elements and system component capacities in circuit-switched TDM networks are discussed in the Bellcore *LATA Switching Systems Generic Requirements*, Section 17, "Traffic Capacity and Environment," Technical Reference TR-TSY-000517, Issue 3, March 1989.

18. FNPRM, App. A, para. 272; App. C, para. 267.

> The term "common costs" refers to "costs that are incurred in connection with the production of multiple products or services, and remains unchanged as the relative proportion of those products or services varies." ... In its rules, the Commission defines forward-looking common costs as "economic costs efficiently incurred in providing a group of elements or services ... that cannot be attributed directly to individual elements or services." The term "overhead costs" refers to common costs incurred by the firm's operations as a whole, such as the salaries of executives.[19]

All such "common costs" – forward-looking, overheads, or others – are to be excluded from any calculation of "incremental cost."

18. In advancing this (actually preposterous) notion, the proposed order seems to be suggesting that a company's decision to invest in a particular capital asset is in all cases premised solely upon being able to profitably support one specific product or service, with any other use beyond that amounting to pure gravy. Apparently, the Chairman's proposed order is oblivious to the possibility that the business case for the acquisition of the productive capital assets was premised upon not just one, but several – or even many – products or services being produced therefrom. For example, a company may be contemplating building a new factory that will manufacture five different products, call them A, B, C, D and E. The business case for the

19. *Id.*, App. A, fn. 442; App. C, fn. 433. While the Chairman's proposed order appears to apply the terms "common costs" and "joint costs" interchangeably, these terms more generally take on different, and distinct, meanings. "Joint costs" typically refer to costs that are common to a several, but less than all, of the firm's services. Faulhaber uses this term in his 1975 paper, but in the Chairman's proposed order the term "common cost" is used to refer to such joint costs. The more typical use of the term "common cost" is in reference to overhead items that support the entirety of the firm. Since the Chairman's proposed order excludes both joint costs and common overhead costs, combining the two concepts into a single "common cost" designation does not affect the result under the "incremental cost" methodology that is being proposed. However, as I discuss in more detail at paras. 21-26 below, "joint costs" and "common overhead costs" do exhibit different properties, and need to be treated differently even under the Chairman's "incremental cost" approach.

project is premised upon revenues and profits being derived from all five products. If even one of those products were not to be produced, the business case would fail, and the factory would not be built at all. The"additional cost"approach being advanced by the proposed order seems oblivious to the manner in which capital investment decisions are made, and instead assumes that the factory here would always be built and that, once built, the capital costs of the factory can be treated as sunk, such that the elimination of one of more products from its output mix would have no *forward-looking* impact upon the (previously committed) investment. Under this distorted notion, the factory is treated as a common or joint cost of all five products, and that as such eliminating any one of them would not affect the capital cost for the factory. Hence, the proposed order seems to conclude, no capital costs can be ascribed to any one specific product and thus must be excluded entirely from the product's "incremental cost."

19. To underscore the sheer absurdity of this concept, suppose that the same "incremental cost" methodology were to be applied to *all five* products. In each case, the capital investment and associated depreciation expenses for the factory would be viewed as common costs and, as such, would be excluded from each of the individual product "incremental cost" calculations. The result of this exercise is that none of the capital costs of the factory would then be ascribed to any of the five constituent products. If the prices of each product were then set on the basis of this "incremental cost," the owner of the factory would have no ability or opportunity to recover its investment, and would certainly have no reason or incentive to make any further capital investments in support of any of the five products, either for expansion of the factory's capacity or to replace "common" equipment that wears out or that becomes obsolete.

20. One means for avoiding this paradox is to apply the "exclude all common costs" paradigm selectively – i.e., to less than all of the products that are jointly produced using the same common plant. Significantly, this seems to be precisely what the Commission has in mind. TELRIC-based rates, which include recovery of common and overhead costs, would continue to apply for most of the products and services that are produced by the ILEC using common plant and other resources. *Only the termination of inbound traffic handed off by another carrier would be subject to the proposed "stand alone" or "incremental" cost approach.* Significantly, nowhere in the Chairman's proposed order does the Commission offer any support or basis for this patently discriminatory treatment.

Overhead costs are in no sense "fixed," and in fact vary directly and proportionately with direct costs and with the overall scale of the enterprise.

21. As the Chairman's proposed order correctly notes,[20] in the *Local Competition First Report and Order*, the Commission directed that TELRIC prices should include a reasonable allocation of forward-looking common costs, including overheads. In the Chairman's proposed order, however, the Commission proposes that all such overhead costs be excluded from the "additional cost" calculations:

> Consistent with our change in methodology, we also disavow our finding in the *Local Competition First Report and Order* that "only that portion of the forward-looking, economic cost of end-office switching that is recovered on a usage-sensitive basis constitutes an "additional costs" to be recovered through termination charges. In

20. *Id.*, App. A, para. 172, App. C, para. 167.

> particular, ... we specifically exclude common costs and overhead allocations from the calculation of what constitutes "additional costs" under our new pricing methodology.[21]

In adopting the TELRIC methodology, the Commission found that "TELRIC calculates the long-run average incremental cost of a network element,"[22] On that basis, "[t]he Commission found that TELRIC rates should also include a reasonable allocation of forward-looking common costs, including overhead costs."[23] In now seeking to "disavow" its prior finding that overhead costs should be included in the determination of each element's "average incremental cost," the Commission appears to have concluded that all such "overhead" costs are fixed – i.e., do not vary with the quantity of output. It is noteworthy, however, that nowhere does the Chairman's proposed order contain a factual finding to that effect, and it neither offers nor cites any evidentiary support for this proposition. In fact, there is compelling evidence to the contrary.

22. Both within individual industries and across multiple industries, "overhead" costs tend to vary both linearly and roughly proportionately with the overall scale of the business – i.e., with the volume of its output. For any given firm, as the total volume of business expands over time, the magnitude of overhead items tends to grow correspondingly, such that the average overhead cost per unit of output remains relatively constant over a broad range of output levels. For example, the size of the HR department, considered an overhead item, tends to vary roughly in

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21. *Id.*, App. A, para. 266; App. C, para. 261. Footnote references omitted.

22. *Id.*, App. A, para. 238; App. C, para. 233.

23. *Id.*

proportion to the total number of employees of the firm, a significant portion of which would constitute direct product-specific costs. Most other overhead categories exhibit a similar relationship with the overall scale of operations.

23. ETI has compiled data from google finance on corporate overhead costs reported by the 499 companies listed on the S&P 500 index as of November 13, 2007, and has performed econometric analysis of this data for the purpose of identifying and quantifying the relationship between overhead costs ("Selling, General and Administrative" or "SG&A" expenses) with the total size of the firm. Because measures of "size" vary among different types of firms (e.g., a manufacturing firm's size can be measured in terms of total output, a retail firm's size is typically measured in terms of total sales, a financial firm's size may be measured in terms of assets under its management, etc.), industry-specific dummy variables were included in the regression model to account for such differences. The results of this analysis, however, clearly show that overhead costs are anything but fixed relative to volume of business.

24. ETI conducted four separate regression analyses on the full S&P 500 dataset that test the variability of SG&A expenses as a function of a firm's size. The first uses total revenues as a measure of size, the second uses total assets, the third uses Property Plant and Equipment (PPE), and the fourth uses employees. Each regression also includes so-called "dummy" variables to account for each of the 10 industry codes that Standard and Poor's assigns to each of the companies in the S&P 500 index. These variables also give effect to the different business structures extant in different industries (e.g., manufacturing firms may have higher overall PPE

than software companies). Regressions were also run on an industry-specific basis, using SG&A as the dependent variable, and total revenues as the independent variable.

25. The results of the regression models confirm that, by any of the four different measures of firm size that were considered over the entire S&P 500 dataset, there is a positive, statistically significant relationship between firm size and overhead expenses. In other words, a firm's SG&A expenses grow roughly in proportion to overall firm size. The results for the telecommunications sector reveal an even stronger relationship, with higher R-squared and *t*-statistics than the full S&P 500. The results of the four market-wide regressions are presented in Table 1 below, and the results of the telecommunications-sector model appear in Table 2.

Table 1

S&P 500 Market-wide regression results

Primary Independent Variable	No. of Observations	Coefficient	*t*-statistic	Adjusted R^2
Total Revenues	411	0.1014842	21.21	0.5623
Property, Plant & Equipment	385	0.1268803	13.65	0.3818
Total Assets	411	0.0238602	10.82	0.2804
Employees	410	25100.8	17.95	0.4855

Table 2

Telecommunication Services industry regression results

Primary Independent Variable	No. of Observations	Coefficient	*t*-statistic	Adjusted R^2
Total Revenues	9	0.2689036	36.31	0.9940

As can be seen from these results, all four measures of firm size produce coefficients that suggest that as firm size grows, SG&A overhead expense grows proportionately. For example, a $1.00 increase in total assets produces a $0.0239 increase in expected SG&A expense. For the telecommunications industry, the model estimates that for each $1.00 increase in total revenues, SG&A expense will increase by $0.2689. These coefficients are all statistically significantly different from zero, as can be seen by the *t*-statistics, which range from 10.82 to 36.31 (well in excess of the 2.626 *t*-statistic required for a 99% confidence level with 100 degrees of freedom). Detailed regression results and input data are provided in Attachment 2 hereto.

26. Of course, a regression cannot by itself prove causality – it can only identify a relationship. Causality can, however, be inferred where logic and economic theory support such a conclusion. The relationship shown above, that overhead expense directly relates to firm size, is easily shown to be causal. All of the categories of expenses quite rationally scale with firm size. As noted above, the human resources (HR) department will need to grow in proportion to the number of employees of the firm. For a sole proprietor, there will likely be no HR department. For a firm with 20 employees, there might be one person responsible for HR functions, while in an Fortune 100 company with tens or hundreds of thousands of employees, there will be a sizable department dedicated to providing human resources services. The same holds true for office space. As a firm grows and hires more employees, the firm will necessarily need more office space for those employees. While the magnitude of the relationships between each of these categories may differ among individual firms depending upon the unique characteristics of each company, the overall nature of the relationship remains the same: as firm size increases,

SG&A overhead costs vary and increase accordingly, and thus may not be excluded from a calculation of any individual product's or service's incremental cost.

The so-called "Faulhaber principle" is entirely inapposite to the determination of long run incremental cost in current regulatory environment.

27. In advancing its "stand alone cost" methodology, the Chairman's proposed order relies heavily – perhaps almost exclusively – upon an approach put forth by former Bell Laboratories economist Gerald Faulhaber back in 1975.[24] The Commission summarizes Faulhaber's method as follows:

> Common cost and its relationship to incremental cost in multiproduct firms can be more precisely defined as follows using an analysis developed by Faulhaber, Baumol, and others. Under this approach, one imagines a multiproduct firm in which a forward looking cost function is known, which allows one to compute the "stand alone cost" of any possible subset of products. For example, if the set of products is indexed by the set N = {1 , ..., n}, then the stand alone cost of the entire firm can be represented by the value C(N). The incremental cost of any individual product *j* contained in N can then be represented by the value IC(*j*) = C(N) – C(N – *j*), where C(N – *j*) represents the stand alone cost of producing every product in the set N except product *j*. Under this definition, the incremental cost may be viewed as the *additional costs* of adding product *j* to a firm currently producing products (N – *j*). Alternatively, it may be viewed as the cost that may be avoided if the firm, currently producing products 1 through *n*, decides not to produce product *j*. The common cost for the firm as a whole is then equal to $C(N) - \sum_{j \in N} IC(j)$. When there is significant sharing of facilities used in providing groups of services to customers, common costs are typically positive, and may be a significant portion of the firm's total cost.[25]

24. Gerald R. Faulhaber, *Cross-Subsidization: Pricing in Public Enterprises*, 65 Am. Econ. Rev. 966-77 (1975).

25. FNPRM, App. A, para. 248; App. C, para. 243.

28. The Commission recognizes (albeit in a footnote) that "Faulhaber's objective in the paper was to define a test for cross-subsidy, which could precisely define the maximum and minimum prices that a *regulated firm should be allowed to charge to any subset of customers*."[26] But this critically important limitation in the scope of Faulhaber's analysis deserves far more than a footnote. Faulhaber's work was aimed at establishing a cost-floor (and, as clarified in his 2002 Note, a cost-ceiling) for purposes of identifying the presence of cross-subsidization, not as a basis for setting a specific price. Even the title of his paper – *Cross-Subsidization: Pricing in Public Enterprises* – makes this apparent, as does the topic question propounded by Faulhaber in the opening paragraph: "does a proposed price structure for the multicommodity enterprise 'unduly' favor the consumers of one commodity at the expense of the purchasers of another commodity, i.e., does the price structure result in cross-subsidy?"

29. As noted by the Chairman's proposed order, Faulhaber's work focused specifically and exclusively upon what a *regulated firm* should be *allowed to do* with respect to setting prices for its various services – indeed, *for all of its various services*. The Faulhaber paper was written at a time when – and is expressly premised upon an environment in which:

- ILECs were subject to rate-of-return regulation and explicit profit constraints;

- The activities of (then) Bell System ILECs and other Bell System entities were entirely limited to the provision of services subject to earnings-based regulation; indeed, the Bell

26. *Id.*, App. A, fn. 655; App. C, fn.646. Emphasis supplied.

entities – ILECs, AT&T's Long Lines Department, and even the Bell equipment and supply affiliate – Western Electric – were expressly *prohibited* by the 1956 Consent Decree from engaging in non-regulated lines of business,[27] and did not do so.

ILECs in existence at the time of Faulhaber's writing were generally thought of as natural monopolies and were engaged in ongoing efforts to preserve and maintain that status. ILECs faced no competition whatsoever with respect to their local exchange services, and only very limited competition in long distance and customer premises equipment. Bell System operating telephone companies, most of which were wholly or near-wholly owned by AT&T, did not offer nonregulated services and, for the most part, did not confront significant competition for any of the regulated services that they did offer.[28] The Bell System operating companies did not provide any nonregulated services – more importantly, they did not provide regulated and nonregulated services that were produced utilizing joint plant and other corporate resources. Bell System and other ILECs were not required to – and did not – provide interconnection arrangements to rival carriers that were the economic and technical equivalent of arrangements they provided to themselves, as they were subsequently required to do upon enactment of the

27. *United States v. Western Electric Co.*, 1956 Trade Cases 71,134 (D.N.J. 1956).

28. While limited competition for customer premises equipment ("CPE") and long distance was beginning to emerge by 1975, competitors confronted several formidable entry constraints that worked to keep such competition to little more than noise level. For example, although customer-owned CPE had been authorized for attachment to ILEC network services as a result of the FCC *Carterphone* decision in 1968, in 1975 customers were still forced to rent a so-called "protective connecting arrangement" ("PCA") from the local telephone company at a price that often exceeded the telco's rental charge for the CPE that was being replaced. Similarly, in order to utilize a competing long distance service such as MCI's then-recently introduced *Execunet*, customers were required to first dial an access number, enter a 14-digit PIN code, followed by the phone number they were attempting to call. Other than the usual early adopters, these competitive offerings attracted few if any mass market customers.

Telecommunications Act of 1996. And in 1975, Bell System and other ILECs were under no obligation to unbundle their networks or to provide unbundled network elements to rival carriers. In short, virtually none of the cross-subsidization and joint cost concerns that have been addressed and dealt with by the FCC and by state PUCs in the aftermath of the *1996 Act* were even at issue at the time of Faulhaber's writing.

30. Faulhaber's analysis is specifically confined "to enterprises which (a) produce and sell at least two differentiable products which can be priced separately, and (b) operate under a constraint on total profit requiring total revenues to exceed the sum of the added costs of each commodity." He explains that

> The natural candidates to fulfill conditions similar to (b) are enterprises characterized by economies of joint production subject to a break-even constraint, such as privately owned publicly regulated utilities, or a publicly owned enterprise required to "stand on its own bottom" ... such as a bridge or turnpike authority. Without loss of generality, we may assume that total profits (earnings in excess of the cost of capital) are constrained to be zero.

Importantly, *none of these conditions are even remotely applicable to BOCs or CLECs as these exist today.*

31. Large – and increasing – portions of BOC and RBOC affiliate activities are no longer regulated at all, and those that remain under some form of economic regulation are in any event no longer subject to any form of profit constraints. Unlike the situation extant in 1975, BOCs today are simultaneously engaged in regulated monopoly and nonregulated competitive services

the provision of which involves often extensive use of joint plant and other company resources. Under this mixed regulated/competitive environment, the BOCs have a strong economic incentive to assign the bulk of their joint costs to monopoly regulated services and, where possible, to apply the very type of Faulhaber incremental cost floor to their *competitive* services so as to achieve a price floor that excludes all common and joint costs and that virtually no competitor could have any hope of replicating. By excluding most joint costs from the cost floor, the proposed adoption of what the Chairman's proposed Order refers to as the Faulhaber approach plays directly into and supports this incentive.

32. The presence of these two key ILEC conditions specified above – rate of return regulation subject to a specific profit constraint, and limitation of activities to regulated services only – is critical to the applicability of the Faulhaber theory. When these conditions are satisfied, any excess profit (or contribution toward joint and common cost) that might have been generated from one service would then be used to benefit other services, and in no event would it simply flow to the BOC's shareholders as excess profits or be used by the BOC to cross-subsidize or otherwise confer a cost advantage upon the BOCs' or their affiliates' competitive lines of business not subject to profit constraints.

Large ILECs – particularly the BOCs – may qualify as "multiproduct firms" with extensive joint and common costs, but smaller, and more specialized CLECs do not share this attribute, a condition that places the more specialized CLECs at an extreme disadvantage under the Chairman's proposed "incremental cost" methodology.

33. Large ILECs such as the BOCs are multiproduct firms producing a broad mix of services that share an extensive array of common plant and other corporate resources. But as the Commission, in reliance upon Faulhaber, has observed, "[w]hen there is significant sharing of facilities used in providing groups of services to customers, common costs are typically positive, and may be a significant portion of the firm's total cost."[29] It follows, then, that the actual portion of a firm's total that falls within the category of "common costs" will necessarily be linked to the extent to which "there is significant sharing of facilities used in providing groups of services to customers." All else equal, a firm that produces a smaller number of products will likely experience relatively less "sharing of facilities used in providing groups of services to customers," such that the portion of the firm's total cost that would constitute "common costs" would be less. All else equal, under the "incremental cost" methodology as described in the Chairman's proposed order, a correspondingly larger portion of the firm's total cost will constitute "incremental cost" for any given service than for a large multiproduct BOC, where a larger proportion of total cost would be shared among two or more services and thus be excluded from the proposed "incremental cost" calculation.

34. Individual CLECs may or may not be multiproduct firms whose production activities involve extensive sharing of facilities across multiple products or services. CLECs are not

29. FNPRM, App. A, para. 248; App. C, para. 243.

merely miniature versions of the BOCs, each offering the same mix of services to the same mix of customers, albeit at a smaller overall scale. As entrants without a century or more of legacy customer relationships and network infrastructure, CLECs must necessarily focus upon specific markets and market segments with the goal of serving each in the most efficient possible manner. Joint production may afford certain efficiencies for the large BOCs, but for a CLEC, specialization in a limited number of services may well be the only viable business model.

35. Importantly, the *1996 Act* neither expects nor requires that a CLEC pursue the same mix of services as an ILEC. With respect to the extent of shared or common costs, a CLEC's cost structure may bear little resemblance to that of a large ILEC, and a costing methodology such as that being proposed in the Chairman's proposed order that implicitly presupposes comparability as to the incidence of common costs as between ILECs and CLECs will necessarily operate to penalize a CLEC for a decision to specialize in a limited number of services. Such a result would be both patently unfair and grossly anticompetitive. And what the Chairman's proposed order is proposing to do is to use *ILEC costs* to set *CLEC prices*. By basing intercarrier compensation rates on ILEC costs that exclude all of the ILEC's extensive joint and common costs, the result cannot reasonably be extrapolated to specialized CLECs that do not have a comparable multiproduct production function.

36. In the *Local Competition First Report and Order*, the Commission concluded that "[a]n incumbent LEC's existing infrastructure enables it to serve new customers at a much lower incremental cost than a facilities-based entrant that must install its own switches, trunking and

loops to serve its customers."[30] The Chairman's proposed order appears to recognize this as well: "When there is significant sharing of facilities used in providing groups of services to customers, common costs are typically positive, and may be a significant portion of the firm's total cost."[31] But (and not recognized by the proposed order) the converse is also true: When there is no significant sharing of facilities used in providing groups of services to customers as in a CLEC whose business model is narrowly focused upon one or a small number of services, common costs typically represent a far smaller portion of total cost, and the CLEC's "additional costs" (per the Faulhaber approach) will be much higher, *even if the CLEC's total costs are actually lower than those of the ILEC*. In the instant case, by imposing the ILEC's near-zero "additional traffic-sensitive cost" as the Chairman's proposed order perceives it to be as a basis for the price that CLECs will be permitted to charge, CLECs will be unable to recover their costs and will ultimately be forced out of the market.

Symmetry

37. Compounding the disadvantage that the Chairman's proposed order's approach would impose upon more specialized carriers is the concurrent proposal to impose mandatory symmetry on CLEC and ILEC intercarrier compensation rates. The Chairman's proposed order recounts that

30. *Local Competition First Report and Order*, at para. 10.

31. FNRPM, App. A, para. 248; App. C, para. 243.

> In the *Local Competition First Report and Order*, the Commission concluded that charges for reciprocal compensation were to be presumptively symmetrical and that it was "reasonable to adopt the incumbent LEC's transport and termination prices as a presumptive proxy for other telecommunications carriers' additional costs of transport and termination." The Commission observed that "[b]oth the incumbent LEC and the interconnecting carriers usually will be providing service in the same geographic area, so the forward-looking economic costs should be similar in most cases."[32]

But the Commission did provide for a safety valve in the event that the ILEC's transport and termination prices failed to cover the other carrier's costs and thus could not serve as a valid proxy. In such an event, "the Commission permitted interconnecting carriers to rebut the presumption of symmetry by submitting a forward-looking cost study to show that their costs of termination were higher than the incumbent LEC's."[33] Of course, to the extent that TELRIC does not incorporate the immense structural discrimination as between large ILECs and specialized CLECs that would arise under the methodology set forth in the Chairman's proposed order, few CLECs availed themselves of this opportunity to seek asymmetric treatment. Ironically, while the discriminatory treatment of large ILECs vs. CLECs that would arise under the "incremental cost" approach being proposed by the Chairman would likely increase the need for CLECs to seek asymmetric treatment, under the proposed order the Commission would "now require symmetric rates and conclude that the exception that permitted asymmetric rates under certain circumstances is no longer warranted." This is not to suggest that the deficiencies in the proposed "incremental cost" methodology could be cured by retaining the right to seek asymmetric treatment, the pursuit of which would impose large costs, delay, and increased

32. *Id.*, App. A, para. 277; App. C, para. 272. Footnote references omitted.

33. *Id.*, App. A, para. 278; App. C, para. 273. Footnote references omitted.

regulatory uncertainty upon a petitioning CLEC. But the fact that the proposed "incremental cost" approach would operate to increase the *need* for asymmetric treatment serves to underscore yet another reason why TELRIC should not be summarily replaced.

38. The Commission concedes "that there appear to be no cost studies or analyses in the record that attempt to estimate the termination costs using Faulhaber's definition of incremental cost."[34] Yet even in the absence of such record evidence, the proposed order expresses the "expect[ation that] the cost estimates in the record to be significantly lower if they had been calculated using Faulhaber's definition."[35] This is hardly surprising: The so-called "Faulhaber approach" excludes large portions of BOC costs that are captured in a TELRIC study, so when entire cost categories (joint and common costs in this case) are excluded, the resulting cost for a given service will necessarily be lower. Ironically, the *presumption* that BOC and CLEC costs of transport and termination would be similar for the same geographic area was far more reasonable under a TELRIC costing methodology than under the "incremental cost" approach being advanced in the Chairman's proposed order. As explained above, the "incremental cost" methodology is extremely sensitive to the extent to which common costs are shared among multiple products or services; TELRIC-based costs do not exhibit this sensitivity to anywhere near the same extent. If BOC "stand alone" costs are to be imposed upon CLECs as the basis for CLEC prices, the divergence of the latter from the former is far more likely than under TELRIC, and the safety valve that had been adopted in the *Local Competition First Report and Order*

34. *Id.*, App. A, para. 253; App. C, para. 248.

35. *Id.*

takes on far greater importance to smaller, more specialized carriers than it had in the past. The Commission offers no valid justification for imposing BOC costs upon CLECs, and certainly advances no basis for eliminating the ability of a CLEC to demonstrate that its costs are greater than those of the incumbent LEC.

39. TELRIC recognizes that "the fixed investment costs that, while not variable in the short term, are necessary inputs directly attributable to providing the element." As such, TELRIC correctly treats all capacity-sensitive cost elements as variable, and produces similar unit costs for companies of widely varying sizes and varying extent of their joint production activities. As it should, TELRIC properly identifies long run economies of scale where present, but confers no particular cost advantage to a multiproduct BOC vis-a-vis a more specialized CLEC other than with respect to their respective scales of operations. That is, TELRIC properly recognizes economies of scale, but does not confer any significant advantage to an BOC vis-a-vis a CLEC due to the BOC's superior economics of scope arising from its ability to share common plant and other resources among multiple services.

40. While the TELRIC methodology could perhaps be tweaked and updated, it captures all cost elements and is not subject to the "which came first" problem of attributing capital costs to one product vs. another. In fact, the proposed order actually recognized this "which came first" problem, but then proceeds to ignore it away:

> For example, a copper loop can be used to provide analog voice service as well as data service using DSL technology. The cost of the loop is therefore common to both voice and DSL services. The incremental cost of voice service, assuming that DSL is already

> provided, therefore does not include any of the long run incremental cost of the loop itself. Similarly, the incremental cost of DSL, assuming voice is already provided, includes only that portion of the loop cost that may be required to condition the loop to meet the higher quality standards that may be required for data transmission.[36]

This is, of course, the crux of the problem that the proposed "additional cost" approach fails to recognize or address, *but which is correctly addressed by TELRIC*.

Selective application of the "incremental cost" approach to intercarrier compensation only further compounds the inherent discrimination present in the proposed costing methodology.

41. While the Chairman's proposed order would apply the "incremental cost" approach to setting unified intercarrier compensation rates, it is silent as to the full extent to which this method would supplant TELRIC or other costing methods currently being employed by the Commission for various other services and service categories. As I have previously noted, TELRIC rates, which include an allocation of common and overhead costs, would continue to apply with respect to UNEs purchased from ILECs by CLECs, whereas the much lower "incremental costs" would apply to purchases of transport and termination services by ILECs from CLECs. Nowhere in the Chairman's proposed order is any rationale or justification, economic or legal, being offered for this obviously discriminatory treatment. Moreover, the Chairman's proposed order is entirely silent as to the costing standard that will apply to *special access* pricing. Special access is, to varying degrees, an economic substitute for switched access, yet special access is not subject to any cost-based pricing rule and, in fact, is priced well

36. *Id.*, App. A, para. 247; App. C, para. 242.

in excess of cost as measured by any standard.[37] Yet if an "incremental cost" approach is to be applied to what is currently classified as "switched access" but which will fall under the unified intercarrier compensation structure, the economic trade-offs between switched and special access will change dramatically. Whatever pricing rule is ultimately adopted for intercarrier compensation, switched and special access and interconnection arrangements should be subject to consistent treatment. No rationale is advanced in the Chairman's proposed order as to why such disparities should be maintained.

42. Also left entirely unaddressed in the Chairman's proposed order is the potential for an integrated RBOC to confer an undue and extraordinary advantage upon its (or its affiliate's) competitive services under the rubric of "incremental cost" pricing. Significantly, in addressing universal service issues, the proposed order expressly recognizes that:

> We note that many companies – in particular price cap carriers – consistently are paying dividends and are using the same supported network to provide both regulated services and non-regulated services. Throughout the course of our comprehensive reform proceedings, commenters have identified this as a concern to be weighed carefully when evaluating the need for universal service support.[38]

Of course, back in 1975 Faulhaber did not contemplate the possibility that the regulated firm would be simultaneously engaged in both regulated and nonregulated services that were produced using common plant or other resources. Indeed, as I have noted, the Faulhaber method

37. *In the Matter of Special Access Rates for Local Exchange Carriers*, CC Docket 05-25, Comments of the Ad Hoc Telecommunications Users Committee, August 8, 2007, p. 4, Appendix 1, pp. A-1 - A-3.

38. FNPRM, App. A, para. 312; App. C, para. 307.

expressly contemplates a utility subject to full rate-of-return regulation with a profit constraint under which economic profits – those in excess of a normal or "competitive" return on investment – is expressly precluded. Nowhere in the Chairman's proposed order is there any discussion as to why the approach being attributed to Faulhaber, which in any event was designed to apply solely in the case of a fully regulated firm subject to express profit constraints, can be adapted to the current hybrid environment.

43. Consider the following example: Verizon is deploying a fiber-to-the-home (FTTH) strategy for offering residential broadband (Internet and video) services, known as FiOS. Typically, when a customer orders FiOS and the fiber optic drop is installed at the customer's home, the preexisting copper drop is removed or impaired, and the customer's voice telephone ("POTS") service is transferred over to the FiOS plant along with the Internet and video services. Even though the primary economic basis for Verizon's FiOS investment is to support *nonregulated* broadband services, once deployed, the FTTH plant – under the theory described in the Chairman's proposed order – assumes the status of a "common cost" of all services capable of being provided over those facilities (POTS, Internet access, and video services). And under that "incremental cost" theory, once the FTTH plant has been deployed, the subsequent elimination of any one of these new broadband services would have an insignificant effect upon the total cost of the FiOS drop. Thus, if one were to apply the same "incremental cost" approach to Verizon's nonregulated Internet access and video services, the cost floor applicable to these competitive offerings would be at or near zero! If this near-zero cost floor is then used as a basis for a cross-subsidization test applied to Verizon's competitive broadband services, Verizon

could then claim the right to set its broadband prices at any level in excess of the near-zero "incremental" cost without violating any statutory or regulatory cross-subsidization restrictions.[39]

44. This illustration underscores the fallacy of trying to apply the "incremental cost" methodology or Faulhaber cross-subsidy test in a mixed regulatory/competitive environment. Clearly, Verizon's motivation for its FiOS investment is broadband, not POTS. POTS is piggy-backing on broadband, not the other way around. Excluding this type of "common cost" simply legitimatizes massive and blatant cross-subsidization.

Conclusion

45. The Chairman's proposed order would limit the applicability of the so-called Faulhaber or "incremental cost" approach to intercarrier compensation payments, while retaining different and inconsistent cost standards (TELRIC for UNEs, average embedded fully-distributed cost for access services) elsewhere. It would also permit the RBOCs to exploit their monopoly control

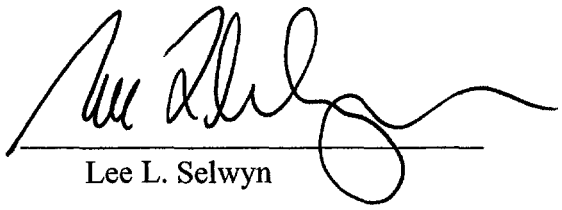
39. The potential for the RBOCs to assign portions of their investments in nonregulated broadband services to regulated POTS and other services is more than theoretical speculation. In a 2007 study undertaken by Economics and Technology, Inc. for the Ad Hoc Telecommunications Users Committee, we estimated that some $13.3-billion out of the $15-billion in cumulative broadband investment as reported by AT&T and Verizon through the end of 2006 had been carried "above the line" as regulated services (rate base) investment. *In the Matter of Special Access Rates for Local Exchange Carriers*, CC Docket 05-25, Comments of the AdHoc Telecommunications Users Committee, August 8, 2007, Appendix 1, pp. A-5 - A-10. While the RBOCs have argued that in a price caps environment such cost allocations as between regulated and nonregulated lines of business are of no consequence, it is indisputable that if these broadband investments were carried "below-the-line" as they should be, AT&T's and Verizon's reported rates of return on their *regulated* services would be significantly greater. Inasmuch as the RBOCs insist upon being "made whole" with respect to any reductions in access charges and other intercarrier compensation rates, such persistent understatements of earnings on their respective regulated services through this type of creative accounting must be factored into the Commission's response to such "make whole" demands.

over certain services to assign only non-common product-specific costs to competitive services, thereby gutting the statutory prohibition on cross-subsidization of competitive services by monopoly services.

46. Simply stated, the proposed approach to setting intercarrier compensation rates is arbitrary, discriminatory, will result in noncompensatory prices, is biased in favor of the large RBOCs at the expense of CLECs, and at a minimum is certainly not sufficiently developed for adoption in the type of abbreviated time frame being allowed here. The Commission should not adopt the Chairman's proposed order.

VERIFICATION

The foregoing statements are true and correct to the best of my knowledge, information and belief, and if asked to testify thereon under oath I am prepared to do so.



Lee L. Selwyn

Executed at Boston, Massachusetts this 26th day of November, 2008.

Attachment 1

STATEMENT OF QUALIFICATIONS

Lee L. Selwyn

ECONOMICS AND TECHNOLOGY, INC.

Attachment 1

Statement of Qualifications

LEE L. SELWYN

Dr. Lee L. Selwyn has been actively involved in the telecommunications field for more than forty years, and is an internationally recognized authority on telecommunications regulation, economics and public policy. Dr. Selwyn founded the firm of Economics and Technology, Inc. in 1972, and has served as its President since that date. He received his Ph.D. degree from the Alfred P. Sloan School of Management at the Massachusetts Institute of Technology. He also holds a Master of Science degree in Industrial Management from MIT and a Bachelor of Arts degree with honors in Economics from Queens College of the City University of New York.

Dr. Selwyn has testified as an expert on rate design, service cost analysis, form of regulation, and other telecommunications policy issues in telecommunications regulatory proceedings before some forty state commissions, the Federal Communications Commission and the Canadian Radio-television and Telecommunications Commission, among others. He has appeared as a witness on behalf of commercial organizations, non-profit institutions, as well as local, state and federal government authorities responsible for telecommunications regulation and consumer advocacy.

He has served or is now serving as a consultant to numerous state utilities commissions including those in Arizona, Minnesota, Kansas, Kentucky, the District of Columbia, Connecticut, California, Delaware, Maine, Massachusetts, New Hampshire, Vermont, New Mexico, Wisconsin and Washington State, the Office of Telecommunications Policy (Executive Office of the President), the National Telecommunications and Information Administration, the Federal Communications Commission, the Canadian Radio-television and Telecommunications Commission, the United Kingdom Office of Telecommunications, and the Secretaria de Comunicaciones y Transportes of the Republic of Mexico. He has also served as an advisor on telecommunications regulatory matters to the International Communications Association and the Ad Hoc Telecommunications Users Committee, as well as to a number of major corporate telecommunications users, information services providers, paging and cellular carriers, and specialized access services carriers.

Dr. Selwyn has presented testimony as an invited witness before the U.S. House of Representatives Subcommittee on Telecommunications, Consumer Protection and Finance and before the U.S. Senate Judiciary Committee, on subjects dealing with restructuring and deregulation of portions of the telecommunications industry.

In 1970, he was awarded a Post-Doctoral Research Grant in Public Utility Economics under a program sponsored by the American Telephone and Telegraph Company, to conduct research on the economic effects of telephone rate structures upon the computer time sharing industry. This work was conducted at Harvard University's Program on Technology and Society, where he was appointed as a Research Associate. Dr. Selwyn was also a member of the faculty at the College of Business Administration at Boston University from 1968 until 1973, where he taught courses in

economics, finance and management information systems.

Dr. Selwyn has been an invited speaker at numerous seminars and conferences on telecommunications regulation and policy, including meetings and workshops sponsored by the National Telecommunications and Information Administration, the National Association of Regulatory Utility Commissioners, the U.S. General Services Administration, the Institute of Public Utilities at Michigan State University, the National Regulatory Research Institute at Ohio State University, the Harvard University Program on Information Resources Policy, the Columbia University Institute for Tele-Information, the International Communications Association, the Tele-Communications Association, the Western Conference of Public Service Commissioners, at the New England, Mid-America, Southern and Western regional PUC/PSC conferences, as well as at numerous conferences and workshops sponsored by individual regulatory agencies.

Papers and Publications

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"Pricing Telephone Terminal Equipment Under Competition," *Public Utilities Fortnightly*, December 8, 1977.

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"Is Equal Access an Adequate Justification for Removing Restrictions on BOC Diversification?" *Presented at the Institute of Public Utilities Eighteenth Annual Conference*, Williamsburg, VA - December 8-10, 1986.

"Market Power and Competition Under an Equal Access Environment," *Presented at the Sixteenth Annual Conference, "Impact of Deregulation and Market Forces on Public Utilities: The Future Role of Regulation," Institute of Public Utilities, Michigan State University*, Williamsburg, VA - December 3-5, 1987.

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"A Perspective on Price Caps as a Substitute for Traditional Revenue Requirements Regulation," *Presented at the Twentieth Annual Conference, "New Regulatory Concepts, Issues and Controversies," Institute of Public Utilities, Michigan State University*, Williamsburg, VA, December, 1988.

"The Sustainability of Competition in Light of New Technologies" (with D. N. Townsend and P. D. Kravtin), *Presented at the Twentieth Annual Conference, Institute of Public Utilities, Michigan State University*, Williamsburg, VA, December, 1988.

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The Effect of Internet Use On The Nation's Telephone Network (with Joseph W. Laszlo), report prepared for the Internet Access Coalition, July 22, 1997.

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Bringing Broadband to Rural America: Investment and Innovation In the Wake of the Telecom Act (with Scott C. Lundquist and Scott A. Coleman), report prepared for the Competitive Broadband Coalition, September 1999.

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Attachment 2

Overhead costs vs. Total Company Size: Regression results and input data

ECONOMICS AND TECHNOLOGY, INC.

```
. regress sga totalrevenue gics15 gics20 gics25 gics30 gics35 gics40 gics45
gics50 gics55 if sga!=-999 & totalrevenue!=-999

      Source |       SS       df       MS              Number of obs =     411
-------------+------------------------------           F( 10,   400) =   53.68
       Model |  6.9273e+21    10  6.9273e+20           Prob > F      =  0.0000
    Residual |  5.1623e+21   400  1.2906e+19           R-squared     =  0.5730
-------------+------------------------------           Adj R-squared =  0.5623
       Total |  1.2090e+22   410  2.9487e+19           Root MSE      =  3.6e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .1014842   .0047836    21.21   0.000     .0920801    .1108884
      gics15 |   2.22e+09   9.01e+08     2.46   0.014     4.49e+08    3.99e+09
      gics20 |   2.66e+09   7.84e+08     3.39   0.001     1.12e+09    4.20e+09
      gics25 |   3.83e+09   7.17e+08     5.35   0.000     2.42e+09    5.24e+09
      gics30 |   5.57e+09   8.14e+08     6.84   0.000     3.97e+09    7.17e+09
      gics35 |   3.60e+09   7.75e+08     4.64   0.000     2.07e+09    5.12e+09
      gics40 |   3.75e+09   8.07e+08     4.65   0.000     2.17e+09    5.34e+09
      gics45 |   3.39e+09   7.29e+08     4.65   0.000     1.96e+09    4.83e+09
      gics50 |   7.75e+09   1.33e+09     5.82   0.000     5.13e+09    1.04e+10
      gics55 |   1.69e+09   1.71e+09     0.99   0.324    -1.67e+09    5.06e+09
       _cons |  -2.39e+09   6.06e+08    -3.95   0.000    -3.58e+09   -1.20e+09
------------------------------------------------------------------------------

.
Total S&P: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress sga ppe gics15 gics20 gics25 gics30 gics35 gics40 gics45 gics50
gics55 if sga!=-999 & ppe!=-999

      Source |       SS       df       MS              Number of obs =     385
-------------+------------------------------           F( 10,   374) =   24.71
       Model |  4.7373e+21    10  4.7373e+20           Prob > F      =  0.0000
    Residual |  7.1695e+21   374  1.9170e+19           R-squared     =  0.3979
-------------+------------------------------           Adj R-squared =  0.3818
       Total |  1.1907e+22   384  3.1007e+19           Root MSE      =  4.4e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         ppe |   .1268803   .0092959    13.65   0.000     .1086015     .145159
      gics15 |   2.19e+09   1.11e+09     1.97   0.050      4559883    4.37e+09
      gics20 |   3.42e+09   9.88e+08     3.47   0.001     1.48e+09    5.37e+09
      gics25 |   4.92e+09   9.08e+08     5.42   0.000     3.13e+09    6.70e+09
      gics30 |   7.73e+09   1.03e+09     7.51   0.000     5.71e+09    9.76e+09
      gics35 |   4.89e+09   9.84e+08     4.97   0.000     2.95e+09    6.82e+09
      gics40 |   4.32e+09   1.04e+09     4.16   0.000     2.28e+09    6.37e+09
      gics45 |   4.23e+09   9.20e+08     4.60   0.000     2.42e+09    6.04e+09
      gics50 |   3.08e+09   1.66e+09     1.86   0.064    -1.80e+08    6.34e+09
      gics55 |   1.22e+09   2.63e+09     0.46   0.644    -3.96e+09    6.39e+09
       _cons |  -2.58e+09   7.69e+08    -3.36   0.001    -4.10e+09   -1.07e+09
------------------------------------------------------------------------------

.
Total S&P: Regress SG&A Expense on PP&E
Regression results from STATA/SE 10.0
```

```
. regress sga totalassets gics15 gics20 gics25 gics30 gics35 gics40 gics45
gics50 gics55 if sga!=-999 & totalassets!=-999

      Source |       SS       df       MS              Number of obs =     411
-------------+------------------------------           F( 10,   400) =   16.97
       Model |  3.6017e+21    10  3.6017e+20           Prob > F      =  0.0000
    Residual |  8.4878e+21   400  2.1220e+19           R-squared     =  0.2979
-------------+------------------------------           Adj R-squared =  0.2804
       Total |  1.2090e+22   410  2.9487e+19           Root MSE      =  4.6e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 totalassets |   .0238602   .0022057    10.82   0.000     .0195239    .0281965
      gics15 |   2.79e+08   1.15e+09     0.24   0.808    -1.98e+09    2.54e+09
      gics20 |   9.69e+08   1.00e+09     0.97   0.333    -9.98e+08    2.94e+09
      gics25 |   2.42e+09   9.14e+08     2.65   0.008     6.22e+08    4.21e+09
      gics30 |   5.45e+09   1.04e+09     5.22   0.000     3.40e+09    7.50e+09
      gics35 |   2.09e+09   9.88e+08     2.12   0.035     1.52e+08    4.04e+09
      gics40 |  -7.64e+08   1.05e+09    -0.73   0.466    -2.82e+09    1.29e+09
      gics45 |   1.42e+09   9.24e+08     1.54   0.125    -3.96e+08    3.24e+09
      gics50 |   6.60e+09   1.71e+09     3.86   0.000     3.24e+09    9.96e+09
      gics55 |  -7.08e+08   2.19e+09    -0.32   0.747    -5.02e+09    3.60e+09
       _cons |   3.70e+08   7.50e+08     0.49   0.622    -1.10e+09    1.85e+09
------------------------------------------------------------------------------

.
Total S&P: Regress SG&A Expense on Total Assets
Regression results from STATA/SE 10.0
```

```
. regress sga employees gics15 gics20 gics25 gics30 gics35 gics40 gics45 gics50
gics55 if sga!=-999 & employees!=-999

      Source |       SS       df       MS              Number of obs =     410
-------------+------------------------------           F( 10,   399) =   39.59
       Model |  6.0189e+21    10  6.0189e+20           Prob > F      =  0.0000
    Residual |  6.0659e+21   399  1.5203e+19           R-squared     =  0.4981
-------------+------------------------------           Adj R-squared =  0.4855
       Total |  1.2085e+22   409  2.9547e+19           Root MSE      =  3.9e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   employees |    25100.8   1398.413    17.95   0.000     22351.62    27849.98
      gics15 |  -2.93e+08   9.71e+08    -0.30   0.763    -2.20e+09    1.62e+09
      gics20 |  -9.04e+08   8.53e+08    -1.06   0.290    -2.58e+09    7.73e+08
      gics25 |   9.55e+08   7.78e+08     1.23   0.220    -5.74e+08    2.48e+09
      gics30 |   2.90e+09   8.93e+08     3.24   0.001     1.14e+09    4.65e+09
      gics35 |   1.60e+09   8.36e+08     1.91   0.056    -4.34e+07    3.24e+09
      gics40 |   1.65e+09   8.68e+08     1.90   0.058    -5.84e+07    3.36e+09
      gics45 |   7.18e+08   7.82e+08     0.92   0.359    -8.20e+08    2.25e+09
      gics50 |   6.04e+09   1.45e+09     4.17   0.000     3.19e+09    8.89e+09
      gics55 |  -6.87e+08   1.85e+09    -0.37   0.711    -4.33e+09    2.96e+09
       _cons |   6.43e+08   6.33e+08     1.02   0.310    -6.02e+08    1.89e+09
------------------------------------------------------------------------------

.
Total S&P: Regress SG&A Expense on Employees
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics10==1

      Source |       SS       df       MS              Number of obs =      38
-------------+------------------------------           F(  1,    36) =   69.31
       Model |  1.4202e+20     1  1.4202e+20           Prob > F      =  0.0000
    Residual |  7.3762e+19    36  2.0490e+18           R-squared     =  0.6582
-------------+------------------------------           Adj R-squared =  0.6487
       Total |  2.1578e+20    37  5.8319e+18           Root MSE      =  1.4e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .0251226   .0030176     8.33   0.000     .0190027    .0312425
       _cons |   2.30e+08   2.54e+08     0.91   0.371    -2.85e+08    7.46e+08
------------------------------------------------------------------------------

.
GICS 10 Energy Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics15==1

      Source |       SS       df       MS              Number of obs =      28
-------------+------------------------------           F(  1,    26) =   13.50
       Model |  7.5666e+18     1  7.5666e+18           Prob > F      =  0.0011
    Residual |  1.4568e+19    26  5.6032e+17           R-squared     =  0.3418
-------------+------------------------------           Adj R-squared =  0.3165
       Total |  2.2135e+19    27  8.1981e+17           Root MSE      =  7.5e+08

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |    .046647   .0126937     3.67   0.001     .0205547    .0727393
       _cons |   4.48e+08   2.02e+08     2.22   0.035     3.37e+07    8.63e+08
------------------------------------------------------------------------------

.
GICS 15 Materials Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics20==1

      Source |       SS       df       MS              Number of obs =      48
-------------+------------------------------           F(  1,    46) =   30.71
       Model |  7.1471e+19     1  7.1471e+19           Prob > F      =  0.0000
    Residual |  1.0705e+20    46  2.3273e+18           R-squared     =  0.4003
-------------+------------------------------           Adj R-squared =  0.3873
       Total |  1.7853e+20    47  3.7984e+18           Root MSE      =  1.5e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .0458407    .008272     5.54   0.000     .0291901    .0624914
       _cons |   1.28e+09   2.66e+08     4.79   0.000     7.40e+08    1.81e+09
------------------------------------------------------------------------------

.
GICS 20 Industrials Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics25==1

      Source |       SS       df       MS              Number of obs =      77
-------------+------------------------------           F(  1,    75) =  263.45
       Model |  9.5711e+20     1  9.5711e+20           Prob > F      =  0.0000
    Residual |  2.7248e+20    75  3.6331e+18           R-squared     =  0.7784
-------------+------------------------------           Adj R-squared =  0.7754
       Total |  1.2296e+21    76  1.6179e+19           Root MSE      =  1.9e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .1188701   .0073237    16.23   0.000     .1042807    .1334596
       _cons |   1.13e+09   2.54e+08     4.44   0.000     6.22e+08    1.63e+09
------------------------------------------------------------------------------

.
GICS 25 Consumer Discretionary Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics30==1

      Source |       SS       df       MS              Number of obs =      40
-------------+------------------------------           F(  1,    38) =  397.92
       Model |  4.7362e+21     1  4.7362e+21           Prob > F      =  0.0000
    Residual |  4.5230e+20    38  1.1903e+19           R-squared     =  0.9128
-------------+------------------------------           Adj R-squared =  0.9105
       Total |  5.1885e+21    39  1.3304e+20           Root MSE      =  3.5e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |    .181966   .0091221    19.95   0.000     .1634993    .2004327
       _cons |   6.31e+08   6.17e+08     1.02   0.313    -6.18e+08    1.88e+09
------------------------------------------------------------------------------

.
GICS 30 Consumer Staples Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics35==1

      Source |       SS       df       MS              Number of obs =      51
-------------+------------------------------           F(  1,    49) =   17.26
       Model |  1.9082e+20     1  1.9082e+20           Prob > F      =  0.0001
    Residual |  5.4169e+20    49  1.1055e+19           R-squared     =  0.2605
-------------+------------------------------           Adj R-squared =  0.2454
       Total |  7.3252e+20    50  1.4650e+19           Root MSE      =  3.3e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .0839432   .0202045     4.15   0.000     .0433408    .1245456
       _cons |   1.49e+09   5.73e+08     2.60   0.012     3.40e+08    2.65e+09
------------------------------------------------------------------------------

.
GICS 35 Health Care Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics40==1

      Source |       SS       df       MS              Number of obs =      43
-------------+------------------------------           F(  1,    41) =  166.34
       Model |  1.0251e+21     1  1.0251e+21           Prob > F      =  0.0000
    Residual |  2.5267e+20    41  6.1626e+18           R-squared     =  0.8023
-------------+------------------------------           Adj R-squared =  0.7974
       Total |  1.2777e+21    42  3.0422e+19           Root MSE      =  2.5e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |    .230885   .0179021    12.90   0.000      .194731     .267039
       _cons |  -2.07e+08   4.36e+08    -0.48   0.637    -1.09e+09    6.74e+08
------------------------------------------------------------------------------

.
GICS 40 Financial Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics45==1

      Source |       SS       df       MS              Number of obs =      72
-------------+------------------------------           F(  1,    70) =  354.25
       Model |  8.1066e+20     1  8.1066e+20           Prob > F      =  0.0000
    Residual |  1.6019e+20    70  2.2884e+18           R-squared     =  0.8350
-------------+------------------------------           Adj R-squared =  0.8326
       Total |  9.7084e+20    71  1.3674e+19           Root MSE      =  1.5e+09

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .1690749   .0089831    18.82   0.000     .1511587     .186991
       _cons |   2.47e+08   2.04e+08     1.21   0.231    -1.61e+08    6.55e+08
------------------------------------------------------------------------------

.
GICS 45 Information Technology Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics50==1

      Source |       SS       df       MS              Number of obs =       9
-------------+------------------------------           F(  1,     7) = 1318.66
       Model |  1.1490e+21     1  1.1490e+21           Prob > F      =  0.0000
    Residual |  6.0992e+18     7  8.7131e+17           R-squared     =  0.9947
-------------+------------------------------           Adj R-squared =  0.9940
       Total |  1.1551e+21     8  1.4438e+20           Root MSE      =  9.3e+08

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .2689036   .0074051    36.31   0.000     .2513934    .2864139
       _cons |   1.00e+08   3.88e+08     0.26   0.804    -8.18e+08    1.02e+09
------------------------------------------------------------------------------

.
GICS 50 Telecommunications Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

```
. regress  sga  totalrevenue if sga!=-999 &  totalrevenue!=-999 &  gics55==1

      Source |       SS       df       MS              Number of obs =       5
-------------+------------------------------           F(  1,     3) =    0.27
       Model |  9.6889e+15     1  9.6889e+15           Prob > F      =  0.6374
    Residual |  1.0644e+17     3  3.5479e+16           R-squared     =  0.0834
-------------+------------------------------           Adj R-squared = -0.2221
       Total |  1.1613e+17     4  2.9032e+16           Root MSE      =  1.9e+08

------------------------------------------------------------------------------
         sga |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
totalrevenue |   .0081013   .0155025     0.52   0.637    -.0412347    .0574373
       _cons |   1.86e+08   1.70e+08     1.10   0.352    -3.53e+08    7.26e+08
------------------------------------------------------------------------------

.
GICS 55 Utilities Industry: Regress SG&A Expense on Total Revenues
Regression results from STATA/SE 10.0
```

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
MMM	3M Company	20	5015000000	24460000000	18390000000	24690000000	75000	0	0	1	0	0	0	0	0	0	0
AES	AES Corp.	55	379000000	13590000000	27520000000	34450000000	28000	0	0	0	0	0	0	0	0	0	1
AFL	AFLAC Inc.	40	-999	15390000000	767000000	65810000000	8048	0	0	0	0	0	0	1	0	0	0
AKS	AK Steel Holding Corp.	15	223500000	7003000000	5131000000	5197000000	6800	0	1	0	0	0	0	0	0	0	0
T	AT&T Inc.	50	30890000000	118900000000	210500000000	275600000000	303530	0	0	0	0	0	0	0	0	1	0
ABT	Abbott Labs	35	7408000000	25910000000	15600000000	39710000000	68000	0	0	0	0	0	1	0	0	0	0
ANF	Abercrombie & Fitch Co.	25	1783000000	3750000000	2054000000	2568000000	9000	0	0	0	1	0	0	0	0	0	0
ADBE	Adobe Systems	45	1259000000	3158000000	580600000	5714000000	6959	0	0	0	0	0	0	0	1	0	0
AMD	Advanced Micro Devices	45	1373000000	6013000000	7888000000	11550000000	15460	0	0	0	0	0	0	0	1	0	0
AET	Aetna Inc.	35	4982000000	27600000000	-999	50720000000	35200	0	0	0	0	0	1	0	0	0	0
ACS	Affiliated Computer	45	-999	6161000000	2217000000	6469000000	63000	0	0	0	0	0	0	0	1	0	0
A	Agilent Technologies	45	1697000000	5774000000	-999	7437000000	19000	0	0	0	0	0	0	0	1	0	0
APD	Air Products & Chemicals	15	1090000000	10410000000	14990000000	12490000000	22000	0	1	0	0	0	0	0	0	0	0
AKAM	Akamai Technologies Inc	45	268700000	636400000	343800000	695000000	1555	0	0	0	0	0	0	0	1	0	0
AA	Alcoa Inc	15	1472000000	30750000000	31600000000	38800000000	107000	0	1	0	0	0	0	0	0	0	0
AYE	Allegheny Energy	55	-999	3307000000	1111000000	9907000000	4355	0	0	0	0	0	0	0	0	0	1
ATI	Allegheny Technologies Inc	15	296700000	5452000000	2389000000	4096000000	9700	0	1	0	0	0	0	0	0	0	0
AGN	Allergan Inc.	35	1680000000	3939000000	1109000000	6579000000	8000	0	0	0	0	0	1	0	0	0	0
AW	Allied Waste Industries	20	631900000	6069000000	8995000000	13950000000	22800	0	0	1	0	0	0	0	0	0	0
ALL	Allstate Corp.	40	-999	36770000000	3002000000	154400000000	38000	0	0	0	0	0	0	1	0	0	0
ALTR	Altera Corp.	45	275000000	1264000000	424000000	1770000000	2730	0	0	0	0	0	0	0	1	0	0
MO	Altria Group Inc.	30	2784000000	18660000000	-999	57210000000	84000	0	0	0	0	1	0	0	0	0	0
AMZN	Amazon Corp.	25	1871000000	14840000000	1023000000	6485000000	20500	0	0	0	1	0	0	0	0	0	0
AEE	Ameren Corporation	55	-999	7546000000	1165000000	20730000000	9069	0	0	0	0	0	0	0	0	0	1
ACAS	American Capital Ltd.	40	353000000	1240000000	-999	11730000000	684	0	0	0	0	0	0	1	0	0	0
AEP	American Electric Power	55	-999	13380000000	3019000000	40370000000	20861	0	0	0	0	0	0	0	0	0	1
AXP	American Express	40	16340000000	31560000000	6145000000	149800000000	67700	0	0	0	0	0	0	1	0	0	0
AIG	American Int'l. Group	40	-999	110100000000	63450000000	1061000000000	116000	0	0	0	0	0	0	1	0	0	0
AMT	American Tower Corp.	50	186500000	1457000000	4992000000	8130000000	1124	0	0	0	0	0	0	0	0	1	0
AMP	Ameriprise Financial Inc.	40	3345000000	8909000000	1606000000	109200000000	8750	0	0	0	0	0	0	1	0	0	0
ABC	AmerisourceBergen Corp.	35	1137000000	70190000000	-999	12150000000	10200	0	0	0	0	0	1	0	0	0	0
AMGN	Amgen	35	3361000000	14770000000	9501000000	34370000000	17400	0	0	0	0	0	1	0	0	0	0
APH	Amphenol Corp.	45	377300000	2851000000	799500000	2676000000	32000	0	0	0	0	0	0	0	1	0	0
APC	Anadarko Petroleum	10	3195000000	15890000000	44210000000	48480000000	4000	1	0	0	0	0	0	0	0	0	0
ADI	Analog Devices	45	393200000	2546000000	1926000000	2972000000	9600	0	0	0	0	0	0	0	1	0	0
BUD	Anheuser-Busch	30	2982000000	16690000000	19230000000	17160000000	30849	0	0	0	0	1	0	0	0	0	0
AOC	Aon Corp.	40	-999	7471000000	1653000000	24950000000	42500	0	0	0	0	0	0	1	0	0	0
APA	Apache Corp.	10	817100000	9998000000	38710000000	28630000000	3521	1	0	0	0	0	0	0	0	0	0
AIV	Apartment Investment & Mgmt'A'	40	89250000	1721000000	12380000000	10610000000	5900	0	0	0	0	0	0	1	0	0	0
APOL	Apollo Group	25	1021000000	3149000000	873900000	1860000000	17736	0	0	0	1	0	0	0	0	0	0
AAPL	Apple Inc.	45	3761000000	32480000000	3747000000	39570000000	32000	0	0	0	0	0	0	0	1	0	0
ABI	Applied Biosystems Inc.	35	639400000	2225000000	-999	2399000000	4930	0	0	0	0	0	1	0	0	0	0
AMAT	Applied Materials	45	965200000	8129000000	-999	10910000000	14550	0	0	0	0	0	0	0	1	0	0
ADM	Archer-Daniels-Midland	30	1419000000	69820000000	17780000000	37060000000	27600	0	0	0	0	1	0	0	0	0	0
AIZ	Assurant Inc	40	2239000000	8454000000	587500000	26750000000	14000	0	0	0	0	0	0	1	0	0	0
AN	AutoNation Inc.	25	2046000000	17690000000	2592000000	8490000000	25000	0	0	0	1	0	0	0	0	0	0
AZO	AutoZone Inc.	25	2144000000	6523000000	3639000000	5257000000	32490	0	0	0	1	0	0	0	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
ADSK	Autodesk Inc.	45	1034000000	2172000000	319100000	2209000000	17300	0	0	0	0	0	0	0	1	0	0
ADP	Automatic Data Processing Inc.	45	2370000000	8777000000	1869000000	23730000000	47000	0	0	0	0	0	0	0	1	0	0
AVB	AvalonBay Communities	40	28490000	812700000	7268000000	6736000000	1898	0	0	0	0	0	0	1	0	0	0
AVY	Avery Dennison Corp.	20	1183000000	6308000000	3196000000	6245000000	37300	0	0	1	0	0	0	0	0	0	0
AVP	Avon Products	30	5125000000	9939000000	2363000000	5716000000	42000	0	0	0	0	1	0	0	0	0	0
BBT	BB&T Corporation	40	-999	-999	2758000000	132600000000	30089	0	0	0	0	0	0	1	0	0	0
BIIB	BIOGEN IDEC Inc.	35	776100000	3172000000	1918000000	8629000000	4300	0	0	0	0	0	1	0	0	0	0
BJS	BJ Services	10	281900000	5426000000	3336000000	4715000000	16700	1	0	0	0	0	0	0	0	0	0
BMC	BMC Software	45	736800000	1732000000	507500000	3346000000	5800	0	0	0	0	0	0	0	1	0	0
BHI	Baker Hughes	10	932800000	10430000000	5321000000	9857000000	35800	1	0	0	0	0	0	0	0	0	0
BLL	Ball Corp.	15	323700000	7390000000	3981000000	6021000000	15500	0	1	0	0	0	0	0	0	0	0
BAC	Bank of America Corp.	40	-999	-999	-999	1716000000000	247024	0	0	0	0	0	0	1	0	0	0
BK	Bank of New York Mellon Corp. (New)	40	-999	-999	-999	197700000000	43200	0	0	0	0	0	0	1	0	0	0
BCR	Bard (C.R.) Inc.	35	644800000	2202000000	577100000	2476000000	10200	0	0	0	0	0	1	0	0	0	0
BRL	Barr Pharmaceuticals Inc.	35	763800000	2501000000	1441000000	4762000000	8900	0	0	0	0	0	1	0	0	0	0
BAX	Baxter International Inc.	35	2521000000	11260000000	8824000000	15290000000	46000	0	0	0	0	0	1	0	0	0	0
BDX	Becton Dickinson	35	1715000000	7156000000	5354000000	7329000000	28018	0	0	0	0	0	1	0	0	0	0
BBBY	Bed Bath & Beyond	25	2087000000	7049000000	2000000000	3844000000	39000	0	0	0	1	0	0	0	0	0	0
BMS	Bemis Company	15	341600000	3649000000	2144000000	3191000000	15700	0	1	0	0	0	0	0	0	0	0
BBY	Best Buy Co. Inc.	25	7385000000	40020000000	5608000000	12760000000	150000	0	0	0	1	0	0	0	0	0	0
BIG	Big Lots Inc.	25	1515000000	4656000000	1397000000	1444000000	14113	0	0	0	1	0	0	0	0	0	0
BDK	Black & Decker Corp.	25	1626000000	6563000000	1788000000	5411000000	25375	0	0	0	1	0	0	0	0	0	0
HRB	Block H&R	25	881900000	4404000000	1051000000	5623000000	9700	0	0	0	1	0	0	0	0	0	0
BA	Boeing Company	20	3531000000	66390000000	20180000000	58990000000	1593000	0	0	1	0	0	0	0	0	0	0
BXP	Boston Properties	40	69880000	1483000000	10250000000	11190000000	660	0	0	0	0	0	0	1	0	0	0
BSX	Boston Scientific	35	3107000000	8357000000	2925000000	31200000000	27500	0	0	0	0	0	1	0	0	0	0
BMY	Bristol-Myers Squibb	35	6320000000	19350000000	10210000000	26170000000	42000	0	0	0	0	0	1	0	0	0	0
BRCM	Broadcom Corporation	45	492700000	3776000000	529300000	4838000000	6853	0	0	0	0	0	0	0	1	0	0
BF.B	Brown-Forman Corp.	30	1007000000	3282000000	907000000	3405000000	4135	0	0	0	0	1	0	0	0	0	0
BNI	Burlington Northern Santa Fe C	20	-999	15800000000	38740000000	33580000000	41103	0	0	1	0	0	0	0	0	0	0
CHRW	C.H. Robinson Worldwide	20	734100000	7316000000	200400000	1811000000	7966	0	0	1	0	0	0	0	0	0	0
CA	CA Inc.	45	1890000000	4277000000	1492000000	11760000000	13700	0	0	0	0	0	0	0	1	0	0
CBG	CB Richard Ellis Group	40	1989000000	6034000000	463100000	6243000000	29000	0	0	0	0	0	0	1	0	0	0
CBS	CBS Corp.	25	2666000000	14070000000	4688000000	40430000000	23970	0	0	0	1	0	0	0	0	0	0
CF	CF Industries Holdings Inc	15	65200000	2757000000	2465000000	2013000000	1400	0	1	0	0	0	0	0	0	0	0
CI	CIGNA Corp.	35	-999	17620000000	2025000000	40070000000	26600	0	0	0	0	0	1	0	0	0	0
CIT	CIT Group	40	1563000000	8605000000	15410000000	90250000000	5245	0	0	0	0	0	0	1	0	0	0
CME	CME Group Inc.	40	293800000	1756000000	812600000	20310000000	1970	0	0	0	0	0	0	1	0	0	0
CMS	CMS Energy	55	-999	6504000000	447000000	14200000000	7898	0	0	0	0	0	0	0	0	0	1
CNX	CONSOL Energy Inc.	10	392200000	3762000000	8945000000	6208000000	7728	1	0	0	0	0	0	0	0	0	0
CSX	CSX Corp.	20	2986000000	10030000000	29000000000	25530000000	35000	0	0	1	0	0	0	0	0	0	0
CVS	CVS Caremark Corp.	30	-999	76330000000	9219000000	54720000000	120000	0	0	0	0	1	0	0	0	0	0
COG	Cabot Oil & Gas	10	660800000	732200000	3013000000	2209000000	404	1	0	0	0	0	0	0	0	0	0
CAM	Cameron International Corp.	10	577600000	4666000000	1627000000	4731000000	15400	1	0	0	0	0	0	0	0	0	0
CPB	Campbell Soup	30	1770000000	7998000000	4766000000	6474000000	19400	0	0	0	0	1	0	0	0	0	0
COF	Capital One Financial	40	-999	-999	3541000000	150600000000	24000	0	0	0	0	0	0	1	0	0	0
CAH	Cardinal Health Inc.	35	3425000000	91090000000	3733000000	23450000000	47600	0	0	0	0	0	1	0	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
CCL	Carnival Corp.	25	2915000000	13030000000	32540000000	34180000000	76500	0	0	0	1	0	0	0	0	0	0
CAT	Caterpillar Inc.	20	3821000000	44960000000	19210000000	56130000000	112104	0	0	1	0	0	0	0	0	0	0
CELG	Celgene Corp.	35	451900000	1406000000	262100000	3611000000	1685	0	0	0	0	0	1	0	0	0	0
CNP	CenterPoint Energy	55	-999	9623000000	446000000	17870000000	8568	0	0	0	0	0	0	0	0	0	1
CTX	Centex Corp.	25	154300000	8276000000	281300000	8137000000	6530	0	0	0	1	0	0	0	0	0	0
CTL	Century Telephone	50	389500000	2656000000	8666000000	8185000000	6600	0	0	0	0	0	0	0	0	1	0
SCHW	Charles Schwab	40	1036000000	4994000000	2068000000	42290000000	13500	0	0	0	0	0	0	1	0	0	0
CHK	Chesapeake Energy	10	243000000	7800000000	35740000000	30730000000	6200	1	0	0	0	0	0	0	0	0	0
CVX	Chevron Corp.	10	5841000	220900000000	154100000000	148800000000	65000	1	0	0	0	0	0	0	0	0	0
CB	Chubb Corp.	40	252000000	14110000000	839000000	50570000000	10600	0	0	0	0	0	0	1	0	0	0
CIEN	Ciena Corp.	45	168300000	779800000	306800000	2416000000	2210	0	0	0	0	0	0	0	1	0	0
CINF	Cincinnati Financial	40	-999	4259000000	515000000	16640000000	4087	0	0	0	0	0	0	1	0	0	0
CTAS	Cintas Corporation	20	1104000000	3938000000	1708000000	3809000000	34000	0	0	1	0	0	0	0	0	0	0
CSCO	Cisco Systems	45	10390000000	39540000000	11700000000	58730000000	66129	0	0	0	0	0	0	0	1	0	0
C	Citigroup Inc.	40	-999	-999	-999	2188000000000	352000	0	0	0	0	0	0	1	0	0	0
CTXS	Citrix Systems	45	819600000	1392000000	325000000	2535000000	4620	0	0	0	0	0	0	0	1	0	0
CLX	Clorox Co.	30	1176000000	5273000000	2594000000	4708000000	8300	0	0	0	0	1	0	0	0	0	0
COH	Coach Inc.	25	1260000000	3181000000	754800000	2274000000	3700	0	0	0	1	0	0	0	0	0	0
KO	Coca Cola Co.	30	10950000000	28860000000	14440000000	43270000000	90500	0	0	0	0	1	0	0	0	0	0
CCE	Coca-Cola Enterprises	30	6390000000	20940000000	15630000000	24050000000	73000	0	0	0	0	1	0	0	0	0	0
CTSH	Cognizant Technology Solutions	45	494100000	2136000000	499000000	1838000000	59500	0	0	0	0	0	0	0	1	0	0
CL	Colgate-Palmolive	30	4939000000	13790000000	6138000000	10110000000	36000	0	0	0	0	1	0	0	0	0	0
CMCSA	Comcast Corp.	25	7934000000	30900000000	43430000000	113400000000	100000	0	0	0	1	0	0	0	0	0	0
CMA	Comerica Inc.	40	-999	-999	1267000000	62330000000	10347	0	0	0	0	0	0	1	0	0	0
CSC	Computer Sciences Corp.	45	975400000	16500000000	6260000000	15770000000	89000	0	0	0	0	0	0	0	1	0	0
CPWR	Compuware Corp.	45	450300000	1230000000	553700000	2019000000	6012	0	0	0	0	0	0	0	1	0	0
CAG	ConAgra Foods Inc.	30	1766000000	11610000000	5023000000	13680000000	25000	0	0	0	0	1	0	0	0	0	0
COP	ConocoPhillips	10	2647000000	194500000000	125400000000	177800000000	32600	1	0	0	0	0	0	0	0	0	0
ED	Consolidated Edison	55	-999	13120000000	59000000	28340000000	15214	0	0	0	0	0	0	0	0	0	1
STZ	Constellation Brands	30	807300000	3773000000	2743000000	10050000000	8200	0	0	0	0	1	0	0	0	0	0
CEG	Constellation Energy Group	55	-999	21190000000	-999	21950000000	10200	0	0	0	0	0	0	0	0	0	1
CVG	Convergys Corp.	45	554900000	2844000000	1414000000	2564000000	75000	0	0	0	0	0	0	0	1	0	0
CBE	Cooper Industries Ltd.	20	1089000000	5903000000	2268000000	6134000000	31504	0	0	1	0	0	0	0	0	0	0
GLW	Corning Inc.	45	912000000	5860000000	10450000000	15220000000	24800	0	0	0	0	0	0	0	1	0	0
COST	Costco Co.	30	6953000000	72480000000	14330000000	20680000000	75000	0	0	0	0	1	0	0	0	0	0
CVH	Coventry Health Care Inc.	35	1790000000	9880000000	626800000	7159000000	15000	0	0	0	0	0	1	0	0	0	0
COV	Covidien Ltd.	35	2881000000	9910000000	4490000000	18330000000	41700	0	0	0	0	0	1	0	0	0	0
CMI	Cummins Inc.	20	1296000000	13050000000	4313000000	8195000000	37800	0	0	1	0	0	0	0	0	0	0
DHI	D.R. Horton	25	1295000000	11300000000	-999	11570000000	6231	0	0	0	1	0	0	0	0	0	0
DTV	DIRECTV Group Inc.	25	4490000000	17250000000	9889000000	15060000000	11300	0	0	0	1	0	0	0	0	0	0
DTE	DTE Energy Co.	55	-999	8506000000	1423000000	23750000000	10262	0	0	0	0	0	0	0	0	0	1
DVA	DaVita Inc.	35	627900000	5264000000	1623000000	6944000000	31000	0	0	0	0	0	1	0	0	0	0
DHR	Danaher Corp.	20	2713000000	11030000000	2511000000	17470000000	50000	0	0	1	0	0	0	0	0	0	0
DRI	Darden Restaurants	25	641600000	6627000000	4992000000	4731000000	180000	0	0	0	1	0	0	0	0	0	0
DF	Dean Foods	30	2141000000	11820000000	3015000000	7033000000	25585	0	0	0	0	1	0	0	0	0	0
DE	Deere & Co.	20	2621000000	24080000000	7852000000	38580000000	52000	0	0	1	0	0	0	0	0	0	0
DELL	Dell Inc.	45	7538000000	66130000000	4614000000	27560000000	80800	0	0	0	0	0	0	0	1	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
XRAY	Dentsply International	35	675400000	2010000000	721400000	2676000000	8900	0	0	0	0	0	1	0	0	0	0
DDR	Developers Diversified Rlty	40	81240000	944900000	8978000000	9090000000	773	0	0	0	0	0	0	1	0	0	0
DVN	Devon Energy Corp.	10	1740000000	11360000000	48470000000	41460000000	5000	1	0	0	0	0	0	0	0	0	0
DFS	Discover Financial Services	40	-999	-999	1359000000	37380000000	14000	0	0	0	0	0	0	1	0	0	0
D	Dominion Resources	55	-999	15670000000	5671000000	39120000000	17000	0	0	0	0	0	0	0	0	0	1
RRD	Donnelley (R.R.) & Sons	20	1302000000	11590000000	7088000000	12090000000	65000	0	0	1	0	0	0	0	0	0	0
DOV	Dover Corp.	20	1641000000	7226000000	2316000000	8070000000	33400	0	0	1	0	0	0	0	0	0	0
DOW	Dow Chemical	15	1864000000	53310000000	47710000000	48800000000	46000	0	1	0	0	0	0	0	0	0	0
DPS	Dr Pepper Snapple Group Inc	30	2018000000	5748000000	1471000000	10530000000	20000	0	0	0	0	1	0	0	0	0	0
DD	Du Pont (E.I.)	15	3364000000	30650000000	26590000000	34130000000	60000	0	1	0	0	0	0	0	0	0	0
DUK	Duke Energy	55	-999	12720000000	5875000000	49400000000	17800	0	0	0	0	0	0	0	0	0	1
DYN	Dynegy Inc.	55	203000000	3103000000	10690000000	13220000000	1800	0	0	0	0	0	0	0	0	0	1
ETFC	E*Trade Financial Corp.	40	149600000	2223000000	905600000	56850000000	3108	0	0	0	0	0	0	1	0	0	0
EMC	EMC Corp.	45	3913000000	13230000000	4807000000	22280000000	37700	0	0	0	0	0	0	0	1	0	0
ESV	ENSCO Int'l	10	59500000	2144000000	4705000000	4969000000	4100	1	0	0	0	0	0	0	0	0	0
EOG	EOG Resources	10	375600000	4191000000	17560000000	12090000000	1800	1	0	0	0	0	0	0	0	0	0
EMN	Eastman Chemical	15	420000000	6830000000	8152000000	6009000000	10500	0	1	0	0	0	0	0	0	0	0
EK	Eastman Kodak	25	1764000000	10300000000	7327000000	13660000000	26900	0	0	0	1	0	0	0	0	0	0
ETN	Eaton Corp.	20	2139000000	13030000000	5242000000	13430000000	82000	0	0	1	0	0	0	0	0	0	0
ECL	Ecolab Inc.	15	2091000000	5470000000	2618000000	4723000000	26052	0	1	0	0	0	0	0	0	0	0
EIX	Edison Int'l	55	-999	13110000000	8364000000	37560000000	17275	0	0	0	0	0	0	0	0	0	1
EP	El Paso Corp.	10	-999	4648000000	36330000000	24580000000	4992	1	0	0	0	0	0	0	0	0	0
ERTS	Electronic Arts	45	927000000	3665000000	1038000000	6059000000	9671	0	0	0	0	0	0	0	1	0	0
EQ	Embarq Corporation	50	1608000000	6365000000	20800000000	8901000000	17000	0	0	0	0	0	0	0	0	1	0
EMR	Emerson Electric	20	5057000000	24810000000	-999	21040000000	137700	0	0	1	0	0	0	0	0	0	0
ETR	Entergy Corp.	55	-999	11480000000	-999	33640000000	14185	0	0	0	0	0	0	0	0	0	1
EFX	Equifax Inc.	20	477100000	1843000000	566400000	3524000000	7000	0	0	1	0	0	0	0	0	0	0
EQR	Equity Residential	40	49290000	2038000000	18330000000	15690000000	4800	0	0	0	0	0	0	1	0	0	0
EL	Estee Lauder Cos.	30	5103000000	7911000000	2394000000	5011000000	32000	0	0	0	0	1	0	0	0	0	0
EXC	Exelon Corp.	55	-999	18920000000	1524000000	45890000000	17800	0	0	0	0	0	0	0	0	0	1
EXPE	Expedia Inc.	25	1314000000	2665000000	429600000	8295000000	7150	0	0	0	1	0	0	0	0	0	0
EXPD	Expeditors Int'l	20	106400000	5235000000	712100000	2069000000	12310	0	0	1	0	0	0	0	0	0	0
ESRX	Express Scripts	35	705600000	18270000000	483900000	5256000000	11820	0	0	0	0	0	1	0	0	0	0
XOM	Exxon Mobil Corp.	10	14890000000	404600000000	280300000000	242100000000	80800	1	0	0	0	0	0	0	0	0	0
FISV	FIserv Inc.	45	555000000	3922000000	828000000	11850000000	25000	0	0	0	0	0	0	0	1	0	0
FPL	FPL Group	55	74000000	15260000000	-999	40120000000	14600	0	0	0	0	0	0	0	0	0	1
FDO	Family Dollar Stores	25	1981000000	6984000000	2089000000	2662000000	25000	0	0	0	1	0	0	0	0	0	0
FAST	Fastenal	20	671300000	2062000000	465500000	1163000000	13417	0	0	1	0	0	0	0	0	0	0
FDX	FedEx Corporation	20	-999	37950000000	29310000000	25630000000	94700	0	0	1	0	0	0	0	0	0	0
FII	Federated Investors Inc.	40	735900000	1128000000	61250000	841000000	1270	0	0	0	0	0	0	1	0	0	0
FIS	Fidelity National Information Services	45	504100000	4758000000	724000000	9795000000	31000	0	0	0	0	0	0	0	1	0	0
FITB	Fifth Third Bancorp	40	-999	-999	3646000000	111000000000	21522	0	0	0	0	0	0	1	0	0	0
FHN	First Horizon National	40	-999	-999	792400000	37020000000	6000	0	0	0	0	0	0	1	0	0	0
FE	FirstEnergy Corp.	55	495000000	12800000000	-999	32070000000	14534	0	0	0	0	0	0	0	0	0	1
FLS	Flowserve Corporation	20	856500000	3763000000	1064000000	3520000000	16000	0	0	1	0	0	0	0	0	0	0
FLR	Fluor Corp. (New)	20	193900000	16690000000	1399000000	5796000000	25842	0	0	1	0	0	0	0	0	0	0
F	Ford Motor	25	21840000000	172500000000	62500000000	279300000000	224000	0	0	0	1	0	0	0	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
FRX	Forest Laboratories	35	1155000000	3836000000	567300000	4525000000	5211	0	0	0	0	0	1	0	0	0	0
FO	Fortune Brands Inc.	25	2036000000	8563000000	3104000000	13960000000	31027	0	0	0	1	0	0	0	0	0	0
BEN	Franklin Resources	40	675800000	6032000000	1204000000	9943000000	8809	0	0	0	0	0	0	1	0	0	0
FCX	Freeport-McMoran Cp & Gld	15	466000000	16940000000	30040000000	40660000000	25400	0	1	0	0	0	0	0	0	0	0
FTR	Frontier Communications	50	390400000	2288000000	7375000000	7256000000	5790	0	0	0	0	0	0	0	0	1	0
GME	GameStop Corp.	25	1182000000	7094000000	929200000	3776000000	13000	0	0	0	1	0	0	0	0	0	0
GCI	Gannett Co.	25	1270000000	7439000000	4922000000	15890000000	46100	0	0	0	1	0	0	0	0	0	0
GPS	Gap (The)	25	-999	15760000000	7320000000	7383000000	150000	0	0	0	1	0	0	0	0	0	0
GD	General Dynamics	20	-999	27240000000	4729000000	25730000000	85600	0	0	1	0	0	0	0	0	0	0
GE	General Electric	20	8015000000	172700000000	119600000000	795300000000	327000	0	0	1	0	0	0	0	0	0	0
GIS	General Mills	30	2625000000	13650000000	6471000000	19040000000	29500	0	0	0	0	1	0	0	0	0	0
GM	General Motors	25	14410000000	181100000000	91590000000	148900000000	252000	0	0	0	1	0	0	0	0	0	0
GPC	Genuine Parts	25	2292000000	10840000000	1050000000	4774000000	32000	0	0	0	1	0	0	0	0	0	0
GNW	Genworth Financial Inc.	40	-999	11130000000	-999	114300000000	7000	0	0	0	0	0	0	1	0	0	0
GENZ	Genzyme Corp.	35	1187000000	3814000000	2805000000	8302000000	10000	0	0	0	0	0	1	0	0	0	0
GILD	Gilead Sciences	35	705700000	4230000000	649000000	5835000000	2979	0	0	0	0	0	1	0	0	0	0
GS	Goldman Sachs Group	40	25900000000	87970000000	14860000000	1120000000000	32569	0	0	0	0	0	0	1	0	0	0
GR	Goodrich Corporation	20	1028000000	6393000000	2953000000	7534000000	23400	0	0	1	0	0	0	0	0	0	0
GT	Goodyear Tire & Rubber	25	2762000000	19640000000	13930000000	17190000000	72000	0	0	0	1	0	0	0	0	0	0
GOOG	Google Inc.	45	2741000000	16590000000	5520000000	25340000000	20123	0	0	0	0	0	0	0	1	0	0
GWW	Grainger (W.W.) Inc.	20	1933000000	6418000000	2004000000	3094000000	15732	0	0	1	0	0	0	0	0	0	0
HCP	HCP Inc.	40	70930000	982500000	9979000000	12520000000	151	0	0	0	0	0	0	1	0	0	0
HAL	Halliburton Co.	10	293000000	15260000000	7756000000	13140000000	51000	1	0	0	0	0	0	0	0	0	0
HOG	Harley-Davidson	25	900700000	6143000000	2758000000	5657000000	9755	0	0	0	1	0	0	0	0	0	0
HAR	Harman Int'l Industries	25	970900000	4113000000	1455000000	2827000000	11694	0	0	0	1	0	0	0	0	0	0
HRS	Harris Corp.	45	953800000	5311000000	1258000000	4559000000	16500	0	0	0	0	0	0	0	1	0	0
HIG	Hartford Financial Svc.Gp.	40	-999	25920000000	-999	360400000000	31000	0	0	0	0	0	0	1	0	0	0
HAS	Hasbro Inc.	25	1507000000	3838000000	589200000	3237000000	5900	0	0	0	1	0	0	0	0	0	0
HNZ	Heinz (H.J.)	30	2112000000	10070000000	4400000000	10570000000	32500	0	0	0	0	1	0	0	0	0	0
HES	Hess Corporation	10	1558000000	31920000000	24830000000	26130000000	13300	1	0	0	0	0	0	0	0	0	0
HPQ	Hewlett-Packard	45	12230000000	104300000000	16410000000	88700000000	172000	0	0	0	0	0	0	0	1	0	0
HD	Home Depot	25	17050000000	77350000000	36410000000	44320000000	331000	0	0	0	1	0	0	0	0	0	0
HON	Honeywell Int'l Inc.	20	4565000000	34590000000	13360000000	33810000000	122000	0	0	1	0	0	0	0	0	0	0
HSP	Hospira Inc.	35	582100000	3436000000	2620000000	5085000000	14000	0	0	0	0	0	1	0	0	0	0
HST	Host Hotels & Resorts	40	69000000	5426000000	14290000000	11810000000	243	0	0	0	0	0	0	1	0	0	0
HCBK	Hudson City Bancorp	40	-999	-999	169500000	44420000000	1406	0	0	0	0	0	0	1	0	0	0
HUM	Humana Inc.	35	3476000000	25290000000	1593000000	12880000000	25000	0	0	0	0	0	1	0	0	0	0
HBAN	Huntington Bancshares	40	-999	-999	1220000000	54700000000	10890	0	0	0	0	0	0	1	0	0	0
RX	IMS Health Inc.	35	625900000	2193000000	371400000	2244000000	7950	0	0	0	0	0	1	0	0	0	0
ITT	ITT Corporation	20	1343000000	9003000000	2633000000	11520000000	39700	0	0	1	0	0	0	0	0	0	0
ITW	Illinois Tool Works	20	2931000000	16170000000	5819000000	15530000000	60000	0	0	1	0	0	0	0	0	0	0
IR	Ingersoll-Rand Co. Ltd.	20	1433000000	8763000000	1782000000	14380000000	35560	0	0	1	0	0	0	0	0	0	0
TEG	Integrys Energy Group Inc.	55	-999	10290000000	572800000	11230000000	5231	0	0	0	0	0	0	0	0	0	1
INTC	Intel Corp.	45	5401000000	38330000000	46050000000	55650000000	83500	0	0	0	0	0	0	0	1	0	0
ICE	IntercontinentalExchange Inc.	40	176900000	574300000	142900000	2796000000	506	0	0	0	0	0	0	1	0	0	0
IBM	International Bus. Machines	45	22060000000	98790000000	38590000000	120400000000	386558	0	0	0	0	0	0	0	1	0	0
IFF	International Flav/Frag	15	375300000	2277000000	1165000000	2277000000	5300	0	1	0	0	0	0	0	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
IGT	International Game Technology	25	460100000	2529000000	-999	4557000000	5400	0	0	0	1	0	0	0	0	0	0
IP	International Paper	15	3034000000	21890000000	25820000000	24160000000	51500	0	1	0	0	0	0	0	0	0	0
IPG	Interpublic Group	25	-999	6554000000	1709000000	12460000000	43000	0	0	0	1	0	0	0	0	0	0
INTU	Intuit Inc.	45	1155000000	3071000000	1192000000	4666000000	8200	0	0	0	0	0	0	0	1	0	0
ISRG	Intuitive Surgical Inc.	35	158700000	600800000	102000000	1040000000	764	0	0	0	0	0	1	0	0	0	0
IVZ	Invesco Ltd	40	453400000	3879000000	787400000	12930000000	5354	0	0	0	0	0	0	1	0	0	0
JDSU	JDS Uniphase Corp.	45	455800000	1530000000	570300000	2906000000	7100	0	0	0	0	0	0	0	1	0	0
JPM	JPMorgan Chase & Co.	40	-999	-999	-999	1562000000000	228452	0	0	0	0	0	0	1	0	0	0
JBL	Jabil Circuit	45	491300000	12800000000	2472000000	7032000000	61000	0	0	0	0	0	0	0	1	0	0
JEC	Jacobs Engineering Group	20	1091000000	11250000000	516800000	3389000000	55000	0	0	1	0	0	0	0	0	0	0
JNS	Janus Capital Group	40	733500000	1117000000	171800000	3564000000	1213	0	0	0	0	0	0	1	0	0	0
JNJ	Johnson & Johnson	35	20450000000	61100000000	26470000000	80950000000	119400	0	0	0	0	0	1	0	0	0	0
JCI	Johnson Controls	25	3565000000	38060000000	-999	25320000000	140000	0	0	0	1	0	0	0	0	0	0
JNY	Jones Apparel Group	25	1100000000	3849000000	751800000	3237000000	8450	0	0	0	1	0	0	0	0	0	0
JNPR	Juniper Networks	45	797200000	2836000000	678200000	6885000000	5879	0	0	0	0	0	0	0	1	0	0
KBH	KB Home	25	824600000	6417000000	-999	5706000000	3100	0	0	0	1	0	0	0	0	0	0
KLAC	KLA-Tencor Corp.	45	467000000	2522000000	851000000	4848000000	6000	0	0	0	0	0	0	0	1	0	0
K	Kellogg Co.	30	3311000000	11780000000	7303000000	11400000000	26500	0	0	0	0	1	0	0	0	0	0
KEY	KeyCorp	40	-999	-999	682000000	99980000000	18291	0	0	0	0	0	0	1	0	0	0
KMB	Kimberly-Clark	30	3106000000	18270000000	16240000000	18440000000	53000	0	0	0	0	1	0	0	0	0	0
KIM	Kimco Realty	40	103900000	681600000	6181000000	9098000000	682	0	0	0	0	0	0	1	0	0	0
KG	King Pharmaceuticals	35	691000000	2137000000	411300000	3427000000	2050	0	0	0	0	0	1	0	0	0	0
KSS	Kohl's Corp.	25	3758000000	16470000000	8540000000	10560000000	26000	0	0	0	1	0	0	0	0	0	0
KFT	Kraft Foods Inc-A	30	7809000000	37240000000	19200000000	67990000000	103000	0	0	0	0	1	0	0	0	0	0
KR	Kroger Co.	30	12800000000	70240000000	22440000000	22300000000	323000	0	0	0	0	1	0	0	0	0	0
LLL	L-3 Communications Holdings	20	-999	13960000000	1466000000	14390000000	64600	0	0	1	0	0	0	0	0	0	0
LSI	LSI Corporation	45	381400000	2604000000	589900000	4396000000	5356	0	0	0	0	0	0	0	1	0	0
LH	Laboratory Corp. of America Holding	35	808700000	4068000000	1062000000	4368000000	26000	0	0	0	0	0	1	0	0	0	0
LM	Legg Mason	40	1596000000	4634000000	592500000	11830000000	4220	0	0	0	0	0	0	1	0	0	0
LEG	Leggett & Platt	25	440600000	4306000000	1811000000	4073000000	24000	0	0	0	1	0	0	0	0	0	0
LEN	Lennar Corp.	25	173200000	10190000000	-999	9103000000	6934	0	0	0	1	0	0	0	0	0	0
LUK	Leucadia National Corp.	40	311700000	1155000000	689600000	8127000000	4057	0	0	0	0	0	0	1	0	0	0
LXK	Lexmark Int'l Inc	45	812800000	4974000000	1995000000	3121000000	13800	0	0	0	0	0	0	0	1	0	0
LLY	Lilly (Eli) & Co.	35	6095000000	18630000000	14840000000	26870000000	39600	0	0	0	0	0	1	0	0	0	0
LTD	Limited Brands Inc.	25	2662000000	10130000000	3811000000	7437000000	19400	0	0	0	1	0	0	0	0	0	0
LNC	Lincoln National	40	-999	10590000000	-999	191400000000	10870	0	0	0	0	0	0	1	0	0	0
LLTC	Linear Technology Corp.	45	142400000	1175000000	689000000	1584000000	4173	0	0	0	0	0	0	0	1	0	0
LIZ	Liz Claiborne Inc.	25	2104000000	4577000000	1327000000	3268000000	16500	0	0	0	1	0	0	0	0	0	0
LMT	Lockheed Martin Corp.	20	-999	41860000000	10310000000	28930000000	140000	0	0	1	0	0	0	0	0	0	0
L	Loews Corp.	40	-999	18380000000	14060000000	76080000000	21700	0	0	0	0	0	0	1	0	0	0
LO	Lorillard Inc.	30	388000000	3969000000	653000000	2600000000	2800	0	0	0	0	1	0	0	0	0	0
LOW	Lowe's Cos.	25	10660000000	48280000000	28840000000	30870000000	160000	0	0	0	1	0	0	0	0	0	0
MTB	M&T Bank Corp.	40	-999	-999	731200000	64880000000	12422	0	0	0	0	0	0	1	0	0	0
MBI	MBIA Inc.	40	-999	-999	237000000	47420000000	486	0	0	0	0	0	0	1	0	0	0
WFR	MEMC Electronic Materials	45	111300000	1922000000	1211000000	2887000000	4900	0	0	0	0	0	0	0	1	0	0
M	Macy's Inc.	25	8554000000	26310000000	16130000000	27790000000	182000	0	0	0	1	0	0	0	0	0	0
MTW	Manitowoc Co.	20	401900000	4005000000	919000000	2869000000	10460	0	0	1	0	0	0	0	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
MRO	Marathon Oil Corp.	10	1721000000	65210000000	39530000000	42750000000	29524	1	0	0	0	0	0	0	0	0	0
MAR	Marriott Int'l.	25	768000000	12990000000	2348000000	8942000000	151000	0	0	0	1	0	0	0	0	0	0
MMC	Marsh & McLennan	40	-999	11350000000	2366000000	17360000000	56000	0	0	0	0	0	0	1	0	0	0
MI	Marshall & Ilsley Corp.	40	-999	-999	919500000	59850000000	9670	0	0	0	0	0	0	1	0	0	0
MAS	Masco Corp.	20	2025000000	11770000000	3990000000	10910000000	52000	0	0	1	0	0	0	0	0	0	0
MEE	Massey Energy Company	10	75840000	2414000000	3650000000	2861000000	6196	1	0	0	0	0	0	0	0	0	0
MA	Mastercard Inc.	45	2838000000	4068000000	541100000	6260000000	5000	0	0	0	0	0	0	0	1	0	0
MAT	Mattel Inc.	25	2047000000	5970000000	1820000000	4805000000	31000	0	0	0	1	0	0	0	0	0	0
MKC	McCormick & Co.	30	806900000	2916000000	1029000000	2788000000	7500	0	0	0	0	1	0	0	0	0	0
MCD	McDonald's Corp.	25	2367000000	22790000000	32200000000	29390000000	390000	0	0	0	1	0	0	0	0	0	0
MHP	McGraw-Hill	25	2438000000	6772000000	1614000000	6357000000	21171	0	0	0	1	0	0	0	0	0	0
MCK	McKesson Corp. (New)	35	3189000000	101700000000	1702000000	24600000000	32900	0	0	0	0	0	1	0	0	0	0
MWV	MeadWestvaco Corporation	15	796000000	6906000000	8004000000	9837000000	24000	0	1	0	0	0	0	0	0	0	0
MHS	Medco Health Solutions Inc.	35	1114000000	44510000000	1952000000	16220000000	19000	0	0	0	0	0	1	0	0	0	0
MDT	Medtronic Inc.	35	4707000000	13520000000	4743000000	22200000000	36484	0	0	0	0	0	1	0	0	0	0
MRK	Merck & Co.	35	7557000000	24200000000	24800000000	48350000000	59800	0	0	0	0	0	1	0	0	0	0
MDP	Meredith Corp.	25	593700000	1587000000	446900000	2060000000	3450	0	0	0	1	0	0	0	0	0	0
MER	Merrill Lynch	40	5241000000	62680000000	8645000000	1020000000000	60900	0	0	0	0	0	0	1	0	0	0
MET	MetLife Inc.	40	8739000000	53010000000	1600000000	558600000000	49000	0	0	0	0	0	0	1	0	0	0
MCHP	Microchip Technology	45	175700000	1036000000	1549000000	2512000000	4811	0	0	0	0	0	0	0	1	0	0
MU	Micron Technology	45	455000000	5841000000	18410000000	13430000000	22800	0	0	0	0	0	0	0	1	0	0
MSFT	Microsoft Corp.	45	16370000000	60420000000	12540000000	72790000000	91000	0	0	0	0	0	0	0	1	0	0
MIL	Millipore Corp.	35	486700000	1532000000	907900000	2777000000	6000	0	0	0	0	0	1	0	0	0	0
MOLX	Molex Inc.	45	665000000	3328000000	3244000000	3600000000	32160	0	0	0	0	0	0	0	1	0	0
TAP	Molson Coors Brewing Company	30	1734000000	6191000000	5411000000	13450000000	9700	0	0	0	0	1	0	0	0	0	0
MON	Monsanto Co.	15	2312000000	11370000000	6725000000	17990000000	21700	0	1	0	0	0	0	0	0	0	0
MWW	Monster Worldwide	20	547600000	1324000000	-999	2078000000	5669	0	0	1	0	0	0	0	0	0	0
MCO	Moody's Corp	40	451100000	2259000000	335500000	1715000000	3600	0	0	0	0	0	0	1	0	0	0
MS	Morgan Stanley	40	18500000000	85330000000	7821000000	1045000000000	46383	0	0	0	0	0	0	1	0	0	0
MOT	Motorola Inc.	45	5092000000	36620000000	7813000000	34810000000	66000	0	0	0	0	0	0	0	1	0	0
MUR	Murphy Oil	10	245500000	18440000000	10630000000	10540000000	2890	1	0	0	0	0	0	0	0	0	0
MYL	Mylan Inc.	35	449600000	2179000000	1752000000	11350000000	12000	0	0	0	0	0	1	0	0	0	0
GAS	NICOR Inc.	55	-999	3176000000	332000000	4252000000	3900	0	0	0	0	0	0	0	0	0	1
NKE	NIKE Inc.	25	5954000000	18630000000	4103000000	12440000000	32500	0	0	0	1	0	0	0	0	0	0
NVDA	NVIDIA Corp.	45	341300000	4098000000	753500000	3748000000	4985	0	0	0	0	0	0	0	1	0	0
NYX	NYSE Euronext	40	312000000	4158000000	1834000000	16620000000	3505	0	0	0	0	0	0	1	0	0	0
NBR	Nabors Industries Ltd.	10	436300000	4941000000	9199000000	10100000000	23965	1	0	0	0	0	0	0	0	0	0
NDAQ	Nasdaq OMX Group Inc	40	407700000	2437000000	208600000	2979000000	891	0	0	0	0	0	0	1	0	0	0
NCC	National City Corp.	40	-999	-999	2884000000	150400000000	29828	0	0	0	0	0	0	1	0	0	0
NOV	National Oilwell Varco Inc.	10	785800000	9789000000	1710000000	12110000000	26731	1	0	0	0	0	0	0	0	0	0
NSM	National Semiconductor	45	315500000	1886000000	2627000000	2149000000	7300	0	0	0	0	0	0	0	1	0	0
NTAP	NetApp Inc.	45	1247000000	3303000000	1097000000	4071000000	7645	0	0	0	0	0	0	0	1	0	0
NYT	New York Times Cl. A	25	1397000000	3195000000	2607000000	3473000000	10231	0	0	0	1	0	0	0	0	0	0
NWL	Newell Rubbermaid Co.	25	1431000000	6407000000	2327000000	6683000000	22500	0	0	0	1	0	0	0	0	0	0
NEM	Newmont Mining Corp. (Hldg. Co.)	15	143000000	5526000000	14820000000	15600000000	15000	0	1	0	0	0	0	0	0	0	0
NWS.A	News Corporation	25	5984000000	33000000000	12980000000	62310000000	64000	0	0	0	1	0	0	0	0	0	0
NI	NiSource Inc.	55	-999	7940000000	-999	18000000000	7607	0	0	0	0	0	0	0	0	0	1

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
NE	Noble Corporation	10	85830000	2995000000	6435000000	5876000000	6600	1	0	0	0	0	0	0	0	0	0
NBL	Noble Energy Inc	10	206400000	3272000000	10330000000	10830000000	1398	1	0	0	0	0	0	0	0	0	0
JWN	Nordstrom	25	2360000000	8828000000	4909000000	5600000000	55000	0	0	0	1	0	0	0	0	0	0
NSC	Norfolk Southern Corp.	20	-999	9432000000	29390000000	26140000000	30806	0	0	1	0	0	0	0	0	0	0
NTRS	Northern Trust Corp.	40	-999	-999	844000000	67610000000	10918	0	0	0	0	0	0	1	0	0	0
NOC	Northrop Grumman Corp.	20	3208000000	32020000000	8155000000	33370000000	122600	0	0	1	0	0	0	0	0	0	0
NOVL	Novell Inc.	45	473900000	932500000	464700000	2854000000	4100	0	0	0	0	0	0	0	1	0	0
NVLS	Novellus Systems	45	266000000	1570000000	903000000	2077000000	3698	0	0	0	0	0	0	0	1	0	0
NUE	Nucor Corp.	15	577800000	16590000000	7150000000	9826000000	18080	0	1	0	0	0	0	0	0	0	0
OXY	Occidental Petroleum	10	1668000000	20010000000	39920000000	36520000000	9700	1	0	0	0	0	0	0	0	0	0
ODP	Office Depot	25	4027000000	15530000000	3921000000	7258000000	49000	0	0	0	1	0	0	0	0	0	0
OMC	Omnicom Group	25	2027000000	12690000000	1767000000	19270000000	70000	0	0	0	1	0	0	0	0	0	0
ORCL	Oracle Corp.	45	5487000000	22430000000	3640000000	47270000000	85188	0	0	0	0	0	0	0	1	0	0
PCAR	PACCAR Inc.	20	643300000	15220000000	5690000000	17230000000	21800	0	0	1	0	0	0	0	0	0	0
PCG	PG&E Corp.	55	-999	13240000000	1365000000	36650000000	20050	0	0	0	0	0	0	0	0	0	1
PNC	PNC Financial Services	40	-999	-999	3765000000	138900000000	25223	0	0	0	0	0	0	1	0	0	0
PPG	PPG Industries	15	2136000000	11210000000	7833000000	12630000000	34900	0	1	0	0	0	0	0	0	0	0
PPL	PPL Corp.	55	-999	6498000000	1489000000	19970000000	11149	0	0	0	0	0	0	0	0	0	1
PTV	Pactiv Corp.	15	286000000	3253000000	2534000000	3765000000	13000	0	1	0	0	0	0	0	0	0	0
PLL	Pall Corp.	20	749500000	2572000000	1496000000	2957000000	10600	0	0	1	0	0	0	0	0	0	0
PH	Parker-Hannifin	20	1364000000	12150000000	4728000000	10390000000	62000	0	0	1	0	0	0	0	0	0	0
PDCO	Patterson Cos. Inc.	35	-999	2999000000	259400000	2076000000	6850	0	0	0	0	0	1	0	0	0	0
PAYX	Paychex Inc.	45	577300000	2066000000	618400000	5310000000	12500	0	0	0	0	0	0	0	1	0	0
BTU	Peabody Energy	10	147200000	4575000000	9166000000	9668000000	7000	1	0	0	0	0	0	0	0	0	0
JCP	Penney (J.C.)	25	5415000000	19860000000	7178000000	14310000000	155500	0	0	0	1	0	0	0	0	0	0
PBCT	Peoples United Financial Inc	40	-999	-999	-999	13540000000	2416	0	0	0	0	0	0	1	0	0	0
POM	Pepco Holdings Inc.	55	-999	9366000000	1729000000	15110000000	5131	0	0	0	0	0	0	0	0	0	1
PBG	Pepsi Bottling Group	30	5124000000	13590000000	8484000000	13120000000	70000	0	0	0	0	1	0	0	0	0	0
PEP	PepsiCo Inc.	30	14210000000	39470000000	21900000000	34630000000	185000	0	0	0	0	1	0	0	0	0	0
PKI	PerkinElmer	35	444400000	1787000000	579800000	2949000000	9100	0	0	0	0	0	1	0	0	0	0
PFE	Pfizer Inc.	35	15530000000	48820000000	28100000000	115300000000	86600	0	0	0	0	0	1	0	0	0	0
PM	Philip Morris Intl.	30	5021000000	55100000000	11870000000	32040000000	75500	0	0	0	0	1	0	0	0	0	0
PNW	Pinnacle West Capital	55	-999	3524000000	625600000	11240000000	7600	0	0	0	0	0	0	0	0	0	1
PXD	Pioneer Natural Resources	10	136600000	1833000000	9251000000	8617000000	1702	1	0	0	0	0	0	0	0	0	0
PBI	Pitney-Bowes	20	1907000000	6130000000	3068000000	9550000000	36165	0	0	1	0	0	0	0	0	0	0
PCL	Plum Creek Timber Co.	40	127000000	1675000000	400000000	4664000000	900	0	0	0	0	0	0	1	0	0	0
RL	Polo Ralph Lauren Corp.	25	1933000000	4880000000	1510000000	4366000000	15000	0	0	0	1	0	0	0	0	0	0
PX	Praxair Inc.	15	1190000000	9402000000	16180000000	13380000000	27957	0	1	0	0	0	0	0	0	0	0
PCP	Precision Castparts	20	358900000	6852000000	1995000000	6050000000	21400	0	0	1	0	0	0	0	0	0	0
PFG	Principal Financial Group	40	-999	10910000000	-999	154500000000	16585	0	0	0	0	0	0	1	0	0	0
PLD	ProLogis	40	204600000	6205000000	15930000000	19720000000	1535	0	0	0	0	0	0	1	0	0	0
PG	Procter & Gamble	30	25730000000	83500000000	38810000000	144000000000	138000	0	0	0	0	1	0	0	0	0	0
PGN	Progress Energy Inc.	55	-999	9153000000	2173000000	26290000000	11000	0	0	0	0	0	0	0	0	0	1
PGR	Progressive Corp.	40	-999	14690000000	1606000000	18840000000	26851	0	0	0	0	0	0	1	0	0	0
PRU	Prudential Financial	40	11740000000	34400000000	-999	485800000000	40703	0	0	0	0	0	0	1	0	0	0
PEG	Public Serv. Enterprise Inc.	55	-999	12580000000	-999	28390000000	2538	0	0	0	0	0	0	0	0	0	1
PSA	Public Storage	40	59750000	1816000000	11720000000	10640000000	5700	0	0	0	0	0	0	1	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
PHM	Pulte Homes Inc.	25	-999	9263000000	-999	10230000000	8500	0	0	0	1	0	0	0	0	0	0
QLGC	QLogic Corp.	45	118200000	597900000	197600000	811000000	933	0	0	0	0	0	0	0	1	0	0
QCOM	QUALCOMM Inc.	45	1717000000	11140000000	3851000000	24560000000	15400	0	0	0	0	0	0	0	1	0	0
DGX	Quest Diagnostics	35	1613000000	6705000000	2106000000	8566000000	43500	0	0	0	0	0	1	0	0	0	0
STR	Questar Corp.	55	165400000	2727000000	3900000	5944000000	2324	0	0	0	0	0	0	0	0	0	1
Q	Qwest Communications Int	50	4306000000	13780000000	46650000000	22530000000	34656	0	0	0	0	0	0	0	0	1	0
RSH	RadioShack Corp	25	1539000000	4252000000	1116000000	1990000000	33900	0	0	0	1	0	0	0	0	0	0
RRC	Range Resources Corp.	10	96760000	862100000	4548000000	4017000000	733	1	0	0	0	0	0	0	0	0	0
RTN	Raytheon Co. (New)	20	1434000000	21300000000	5478000000	23280000000	72100	0	0	1	0	0	0	0	0	0	0
RF	Regions Financial Corp.	40	-999	-999	3561000000	141000000000	30673	0	0	0	0	0	0	1	0	0	0
RAI	Reynolds American Inc.	30	1687000000	9023000000	2590000000	18630000000	7100	0	0	0	0	1	0	0	0	0	0
RHI	Robert Half International	20	1498000000	4646000000	654000000	1450000000	15300	0	0	1	0	0	0	0	0	0	0
ROK	Rockwell Automation Inc.	20	1464000000	5698000000	1715000000	4594000000	21000	0	0	1	0	0	0	0	0	0	0
COL	Rockwell Collins	20	72000000	4769000000	-999	4144000000	20000	0	0	1	0	0	0	0	0	0	0
ROH	Rohm & Haas	15	1091000000	8897000000	8779000000	10210000000	15710	0	1	0	0	0	0	0	0	0	0
RDC	Rowan Cos.	10	94910000	2095000000	3545000000	3875000000	5704	1	0	0	0	0	0	0	0	0	0
R	Ryder System	20	-999	6566000000	8556000000	6855000000	28800	0	0	1	0	0	0	0	0	0	0
SLM	SLM Corporation	40	1789000000	9171000000	-999	155600000000	11000	0	0	0	0	0	0	1	0	0	0
SWY	Safeway Inc.	30	10380000000	42290000000	19420000000	17650000000	201000	0	0	0	0	1	0	0	0	0	0
CRM	Salesforce Com Inc Com	45	493000000	748700000	78830000	1090000000	3046	0	0	0	0	0	0	0	1	0	0
SNDK	SanDisk Corporation	45	476100000	3896000000	797800000	7235000000	3172	0	0	0	0	0	0	0	1	0	0
SLE	Sara Lee Corp.	30	4039000000	13210000000	5444000000	10830000000	44000	0	0	0	0	1	0	0	0	0	0
SGP	Schering-Plough	35	5468000000	12690000000	10350000000	29160000000	55000	0	0	0	0	0	1	0	0	0	0
SLB	Schlumberger Ltd.	10	598800000	23710000000	-999	27850000000	80000	1	0	0	0	0	0	0	0	0	0
SNI	Scripps Network Interactive Inc.	25	669600000	1441000000	302200000	2018000000	-999	0	0	0	1	0	0	0	0	0	0
SEE	Sealed Air Corp.(New)	15	750200000	4651000000	3099000000	5438000000	17700	0	1	0	0	0	0	0	0	0	0
SHLD	Sears Holdings Corporation	25	11470000000	50700000000	11360000000	27400000000	302000	0	0	0	1	0	0	0	0	0	0
SRE	Sempra Energy	55	-999	11440000000	20920000000	30090000000	14314	0	0	0	0	0	0	0	0	0	1
SHW	Sherwin-Williams	25	2615000000	8005000000	2227000000	4855000000	31572	0	0	0	1	0	0	0	0	0	0
SIAL	Sigma-Aldrich	15	517100000	2039000000	1495000000	2629000000	8000	0	1	0	0	0	0	0	0	0	0
SPG	Simon Property Group Inc	40	380300000	3651000000	24420000000	23610000000	3200	0	0	0	0	0	0	1	0	0	0
SII	Smith International	10	1486000000	8764000000	1905000000	6062000000	19865	1	0	0	0	0	0	0	0	0	0
SJM	Smucker (J.M.) (New)	30	490700000	2525000000	874000000	3130000000	3250	0	0	0	0	1	0	0	0	0	0
SNA	Snap-On Inc.	25	964200000	2841000000	791900000	2765000000	11600	0	0	0	1	0	0	0	0	0	0
SO	Southern Co.	55	-999	15350000000	3228000000	45790000000	26742	0	0	0	0	0	0	0	0	0	1
LUV	Southwest Airlines	20	-999	9861000000	15160000000	16770000000	34545	0	0	1	0	0	0	0	0	0	0
SWN	Southwestern Energy	10	80270000	1255000000	4278000000	3623000000	1521	1	0	0	0	0	0	0	0	0	0
SOV	Sovereign Bancorp	40	-999	-999	949900000	84750000000	10427	0	0	0	0	0	0	1	0	0	0
SE	Spectra Energy Corp.	10	-999	4742000000	18150000000	22970000000	5100	1	0	0	0	0	0	0	0	0	0
S	Sprint Nextel Corp.	50	12670000000	40150000000	47970000000	64110000000	60000	0	0	0	0	0	0	0	0	1	0
STJ	St Jude Medical	35	1382000000	3779000000	1399000000	5329000000	12000	0	0	0	0	0	1	0	0	0	0
SWK	Stanley Works	25	1058000000	4484000000	1459000000	4780000000	18400	0	0	0	1	0	0	0	0	0	0
SPLS	Staples Inc.	25	3987000000	19370000000	4686000000	9036000000	43048	0	0	0	1	0	0	0	0	0	0
SBUX	Starbucks Corp.	25	456000000	10380000000	-999	5673000000	172000	0	0	0	1	0	0	0	0	0	0
HOT	Starwood Hotels & Resorts	25	513000000	6153000000	6214000000	9662000000	155000	0	0	0	1	0	0	0	0	0	0
STT	State Street Corp.	40	-999	-999	4544000000	142500000000	27110	0	0	0	0	0	0	1	0	0	0
SYK	Stryker Corp.	35	2392000000	6001000000	2788000000	7354000000	16026	0	0	0	0	0	1	0	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
JAVA	Sun Microsystems	45	3955000000	13800000000	4880000000	14340000000	34909	0	0	0	0	0	0	0	1	0	0
STI	SunTrust Banks	40	-999	-999	3410000000	179600000000	29447	0	0	0	0	0	0	1	0	0	0
SUN	Sunoco Inc.	10	952000000	44730000000	11470000000	12430000000	14200	1	0	0	0	0	0	0	0	0	0
SVU	Supervalu Inc.	30	8421000000	44050000000	11110000000	21060000000	190000	0	0	0	0	1	0	0	0	0	0
SYMC	Symantec Corp.	45	2763000000	5874000000	2081000000	18090000000	17600	0	0	0	0	0	0	0	1	0	0
SYY	Sysco Corp.	30	-999	37520000000	5464000000	10080000000	50000	0	0	0	0	1	0	0	0	0	0
TROW	T. Rowe Price Group	40	200000000	2233000000	640000000	3177000000	5364	0	0	0	0	0	0	1	0	0	0
TE	TECO Energy	55	-999	3536000000	701200000	6765000000	4300	0	0	0	0	0	0	0	0	0	1
TJX	TJX Companies Inc.	25	3324000000	18650000000	4771000000	6600000000	129000	0	0	0	1	0	0	0	0	0	0
TGT	Target Corp.	25	13700000000	63370000000	31980000000	44560000000	366000	0	0	0	1	0	0	0	0	0	0
TLAB	Tellabs Inc.	45	275700000	1913000000	670100000	3747000000	3716	0	0	0	0	0	0	0	1	0	0
THC	Tenet Healthcare Corp.	35	567000000	8852000000	7424000000	8393000000	46183	0	0	0	0	0	1	0	0	0	0
TDC	Teradata Corp.	45	470000000	1702000000	250000000	1294000000	5900	0	0	0	0	0	0	0	1	0	0
TER	Teradyne Inc.	45	250800000	1102000000	825800000	1555000000	3600	0	0	0	0	0	0	0	1	0	0
TSO	Tesoro Petroleum Co.	10	263000000	21920000000	5856000000	8128000000	5500	1	0	0	0	0	0	0	0	0	0
TXN	Texas Instruments	45	1681000000	13840000000	7568000000	12670000000	30175	0	0	0	0	0	0	0	1	0	0
TXT	Textron Inc.	20	1692000000	13230000000	4387000000	19960000000	40000	0	0	1	0	0	0	0	0	0	0
HSY	The Hershey Company	30	895900000	4947000000	3606000000	4247000000	11000	0	0	0	0	1	0	0	0	0	0
TRV	The Travelers Companies Inc.	40	3352000000	26020000000	-999	115200000000	33300	0	0	0	0	0	0	1	0	0	0
TMO	Thermo Fisher Scientific	35	2549000000	9746000000	1717000000	21210000000	33000	0	0	0	0	0	1	0	0	0	0
TIF	Tiffany & Co.	25	1205000000	2939000000	1399000000	2922000000	8800	0	0	0	1	0	0	0	0	0	0
TWX	Time Warner Inc.	25	9653000000	46480000000	30350000000	133800000000	86400	0	0	0	1	0	0	0	0	0	0
TIE	Titanium Metals Corp	15	69000000	1278000000	681400000	1420000000	2530	0	1	0	0	0	0	0	0	0	0
TMK	Torchmark Corp.	40	155500000	3487000000	-999	15240000000	2354	0	0	0	0	0	0	1	0	0	0
TSS	Total System Services	45	413400000	1806000000	549600000	1479000000	7761	0	0	0	0	0	0	0	1	0	0
RIG	Transocean Inc. (New)	10	142000000	6377000000	24550000000	34360000000	21100	1	0	0	0	0	0	0	0	0	0
TEL	Tyco Electronics Ltd.	45	1680000000	14830000000	8810000000	21600000000	96000	0	0	0	0	0	0	0	1	0	0
TYC	Tyco International (New)	20	4906000000	20200000000	8642000000	28800000000	113000	0	0	1	0	0	0	0	0	0	0
TSN	Tyson Foods	30	879000000	26860000000	-999	10850000000	104000	0	0	0	0	1	0	0	0	0	0
USB	U.S. Bancorp	40	-999	-999	5402000000	237600000000	54000	0	0	0	0	0	0	1	0	0	0
UST	UST Inc.	30	529800000	1951000000	900600000	1487000000	4610	0	0	0	0	1	0	0	0	0	0
UNP	Union Pacific	20	1695000000	16280000000	45650000000	38030000000	49073	0	0	1	0	0	0	0	0	0	0
UPS	United Parcel Service	20	958000000	49690000000	33610000000	39040000000	425300	0	0	1	0	0	0	0	0	0	0
X	United States Steel Corp.	15	589000000	16870000000	14790000000	15630000000	49000	0	1	0	0	0	0	0	0	0	0
UTX	United Technologies	20	6109000000	54760000000	14880000000	54580000000	225600	0	0	1	0	0	0	0	0	0	0
UNH	UnitedHealth Group Inc.	35	-999	75430000000	3699000000	50900000000	67000	0	0	0	0	0	1	0	0	0	0
UNM	Unum Group	40	722400000	10520000000	-999	52430000000	9700	0	0	0	0	0	0	1	0	0	0
VFC	V.F. Corp.	25	2174000000	7219000000	1529000000	6447000000	54200	0	0	0	1	0	0	0	0	0	0
VLO	Valero Energy	10	1388000000	95330000000	25790000000	42720000000	21651	1	0	0	0	0	0	0	0	0	0
VAR	Varian Medical Systems	35	322500000	2070000000	452600000	1976000000	4500	0	0	0	0	0	1	0	0	0	0
VRSN	Verisign Inc.	45	552800000	1496000000	1230000000	4023000000	4251	0	0	0	0	0	0	0	1	0	0
VZ	Verizon Communications	50	25970000000	93470000000	214000000000	187000000000	228315	0	0	0	0	0	0	0	0	1	0
VIA.B	Viacom Inc. (New)	25	2664000000	13420000000	2653000000	22900000000	10800	0	0	0	1	0	0	0	0	0	0
VNO	Vornado Realty Trust	40	232100000	3271000000	18970000000	22480000000	4020	0	0	0	0	0	0	1	0	0	0
VMC	Vulcan Materials	15	289600000	3328000000	5803000000	8936000000	10522	0	1	0	0	0	0	0	0	0	0
WB	Wachovia Corp. (New)	40	-999	-999	-999	782900000000	117227	0	0	0	0	0	0	1	0	0	0
WMT	Wal-Mart Stores	30	70290000000	378200000000	128400000000	163500000000	2100000	0	0	0	0	1	0	0	0	0	0

symbol	company	gics	sga	totalrevenue	ppe	totalassets	employees	gics10	gics15	gics20	gics25	gics30	gics35	gics40	gics45	gics50	gics55
WAG	Walgreen Co.	30	13200000000	59030000000	12920000000	22410000000	163000	0	0	0	0	1	0	0	0	0	0
DIS	Walt Disney Co.	25	-999	37840000000	33840000000	62500000000	150000	0	0	0	1	0	0	0	0	0	0
WPO	Washington Post	25	1582000000	4180000000	2877000000	6005000000	19000	0	0	0	1	0	0	0	0	0	0
WMI	Waste Management Inc.	20	8634000000	13310000000	24200000000	20180000000	47400	0	0	1	0	0	0	0	0	0	0
WAT	Waters Corporation	35	403700000	1473000000	347400000	1881000000	5000	0	0	0	0	0	1	0	0	0	0
WPI	Watson Pharmaceuticals	35	421200000	2497000000	1016000000	3472000000	5640	0	0	0	0	0	1	0	0	0	0
WFT	Weatherford International Ltd.	10	980100000	7832000000	6554000000	13190000000	46700	1	0	0	0	0	0	0	0	0	0
WLP	WellPoint Inc.	35	8702000000	61130000000	2180000000	52060000000	41700	0	0	0	0	0	1	0	0	0	0
WFC	Wells Fargo	40	-999	-999	10650000000	575400000000	159000	0	0	0	0	0	0	1	0	0	0
WU	Western Union Co	45	769800000	4900000000	451800000	5855000000	6100	0	0	0	0	0	0	0	1	0	0
WY	Weyerhaeuser Corp.	15	1164000000	10930000000	289000000	23810000000	37900	0	1	0	0	0	0	0	0	0	0
WHR	Whirlpool Corp.	25	1736000000	19410000000	9171000000	14010000000	73000	0	0	0	1	0	0	0	0	0	0
WFMI	Whole Foods Market	30	2434000000	7954000000	-999	3381000000	44900	0	0	0	0	1	0	0	0	0	0
WMB	Williams Cos.	10	632000000	10560000000	22790000000	25060000000	4319	1	0	0	0	0	0	0	0	0	0
WIN	Windstream Corporation	50	412100000	3261000000	9221000000	8211000000	7570	0	0	0	0	0	0	0	0	1	0
WEC	Wisconsin Energy	55	-999	4238000000	1764000000	11720000000	5000	0	0	0	0	0	0	0	0	0	1
WYE	Wyeth	35	6754000000	22400000000	16220000000	42720000000	50527	0	0	0	0	0	1	0	0	0	0
WYN	Wyndham Worldwide	25	1350000000	4360000000	1604000000	10460000000	33200	0	0	0	1	0	0	0	0	0	0
WYNN	Wynn Resorts Ltd.	25	414900000	2688000000	4377000000	6299000000	16500	0	0	0	1	0	0	0	0	0	0
XL	XL Capital	40	-999	9136000000	-999	57760000000	4011	0	0	0	0	0	0	1	0	0	0
XTO	XTO Energy Inc.	10	675000000	5513000000	21100000000	18920000000	2361	1	0	0	0	0	0	0	0	0	0
XEL	Xcel Energy Inc	55	-999	10030000000	3282000000	23180000000	10917	0	0	0	0	0	0	0	0	0	1
XRX	Xerox Corp.	45	4312000000	17230000000	4509000000	23540000000	57400	0	0	0	0	0	0	0	1	0	0
XLNX	Xilinx Inc	45	365300000	1841000000	789500000	3137000000	3415	0	0	0	0	0	0	0	1	0	0
YHOO	Yahoo Inc.	45	2244000000	6696000000	2289000000	12230000000	14300	0	0	0	0	0	0	0	1	0	0
YUM	Yum! Brands Inc	25	1333000000	10420000000	7132000000	7242000000	48160	0	0	0	1	0	0	0	0	0	0
ZMH	Zimmer Holdings	35	1490000000	3880000000	1976000000	6634000000	7600	0	0	0	0	0	1	0	0	0	0
ZION	Zions Bancorp	40	-999	-999	1197000000	52950000000	10971	0	0	0	0	0	0	1	0	0	0
EBAY	eBay Inc.	45	3081000000	7672000000	2432000000	15370000000	15500	0	0	0	0	0	0	0	1	0	0

GICS code legend

Energy	10
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List of S&P 500 Companies from Standard and Poor's as of November 13, 2008.

Data downloaded from http://finance.google.com/finance on November 21, 2008.

Cells containing "-999" indicate that data was unavailable from Google Finance as of the date of download.